

### Extra Ordinary Part - IV-A / 2018

| Extra No.   | Date       | Department   |
|-------------|------------|--|
| Extra No.1  | 04-01-2018 | Home Department  |
| Extra No.2  | 04-01-2018 | Health & Family Welfare Department                     |
| Extra No.3  | 10-01-2018 | Labour & Employment Department                         |
| Extra No.4  | 16-01-2018 | Food, Civil Supplies & Consumer Affairs Department     |
| Extra No.5  | 17-01-2018 | Gujarat Legislature Secretariat                        |
| Extra No.6  | 22-01-2018 | Home Department  |
| Extra No.7  | 23-01-2018 | Agriculture, Farmers Welfare & Co-operation Department |
| Extra No.8  | 23-01-2018 | Agriculture, Farmers Welfare & Co-operation Department |
| Extra No.9  | 23-01-2018 | Agriculture, Farmers Welfare & Co-operation Department |
| Extra No.10 | 23-01-2018 | Forest & Environment Department                        |
| Extra No.11 | 25-01-2018 | Food, Civil Supplies & Consumer Affairs Department     |
| Extra No.12 | 05-02-2018 | Finance Department                                     |
| Extra No.13 | 05-02-2018 | Home Department  |
| Extra No.14 | 07-02-2018 | Home Department  |
| Extra No.15 | 08-02-2018 | Social Justice & Empowerment Department                |
| Extra No.16 | 12-02-2018 | Woman & Child Development Department                   |
| Extra No.17 | 14-02-2018 | Legal Department                                       |
| Extra No.18 | 03-03-2018 | Food, Civil Supplies & Consumer Affairs Department     |
| Extra No.19 | 13-03-2018 | Ports & Transport Department                           |
| Extra No.20 | 13-03-2018 | Industries & Mines Department                          |
| Extra No.21 | 22-03-2018 | Energy & Petrochemicals Department                     |
| Extra No.22 | 23-03-2018 | Home Department  |
| Extra No.23 | 23-03-2018 | Labour & Employment Department                         |

| <b>Extra No.</b> | <b>Date</b> | <b>Department</b>   |
|------------------|-------------|---|
| Extra No.24      | 23-03-2018  | Labour & Employment Department                              |
| Extra No.25      | 31-03-2018  | Legal Department  |
| Extra No.26      | 05-04-2018  | Revenue Department  |
| Extra No.27      | 05-04-2018  | Ports & Transport Department                                |
| Extra No.28      | 10-04-2018  | Legal Department  |
| Extra No.29      | 12-04-2018  | Narmada, Water Resources, Water Supply & Kalpsar Department |
| Extra No.30      | 20-04-2018  | Woman & Child Development Department                        |
| Extra No.31      | 26-04-2018  | Other   |
| Extra No.32      | 02-05-2018  | General Administration Department                           |
| Extra No.33      | 02-05-2018  | General Administration Department                           |
| Extra No.34      | 03-05-2018  | Food, Civil Supplies & Consumer Affairs Department          |
| Extra No.35      | 08-05-2018  | Forest & Environment Department                             |
| Extra No.36      | 08-05-2018  | Food, Civil Supplies & Consumer Affairs Department          |
| Extra No.37      | 08-05-2018  | Food, Civil Supplies & Consumer Affairs Department          |
| Extra No.38      | 08-05-2018  | Food, Civil Supplies & Consumer Affairs Department          |
| Extra No.39      | 10-05-2018  | Food, Civil Supplies & Consumer Affairs Department          |
| Extra No.40      | 10-05-2018  | Home Department   |
| Extra No.41      | 11-05-2018  | Food, Civil Supplies & Consumer Affairs Department          |
| Extra No.42      | 14-05-2018  | Food, Civil Supplies & Consumer Affairs Department          |
| Extra No.43      | 15-05-2018  | General Administration Department                           |
| Extra No.44      | 18-05-2018  | Health & Family Welfare Department                          |
| Extra No.45      | 22-05-2018  | Forest & Environment Department                             |
| Extra No.46      | 23-05-2018  | Home Department   |

| <b>Extra No.</b> | <b>Date</b> | <b>Department</b>                                  |
|------------------|-------------|--|
| Extra No.47      | 29-05-2018  | Legal Department                                   |
| Extra No.48      | 29-05-2018  | Health & Family Welfare Department                 |
| Extra No.49      | 29-05-2018  | Legal Department                                   |
| Extra No.50      | 29-05-2018  | Legal Department                                   |
| Extra No.51      | 01-06-2018  | Ports & Transport Department                       |
| Extra No.52      | 02-06-2018  | Ports & Transport Department                       |
| Extra No.53      | 04-06-2018  | Legal Department                                   |
| Extra No.54      | 04-06-2018  | Industries & Mines Department                      |
| Extra No.55      | 05-06-2018  | Legal Department                                   |
| Extra No.56      | 05-06-2018  | Home Department                                    |
| Extra No.57      | 06-06-2018  | Labour & Employment Department                     |
| Extra No.58      | 20-06-2018  | Home Department                                    |
| Extra No.59      | 20-06-2018  | Legal Department                                   |
| Extra No.60      | 26-06-2018  | Legal Department                                   |
| Extra No.61      | 26-06-2018  | Social Justice & Empowerment Department            |
| Extra No.62      | 26-06-2018  | Forest & Environment Department                    |
| Extra No.63      | 28-06-2018  | Legal Department                                   |
| Extra No.64      | 02-07-2018  | Finance Department                                 |
| Extra No.65      | 05-07-2018  | Industries & Mines Department                      |
| Extra No.66      | 06-07-2018  | Food, Civil Supplies & Consumer Affairs Department |
| Extra No.67      | 06-07-2018  | Food, Civil Supplies & Consumer Affairs Department |
| Extra No.68      | 06-07-2018  | Food, Civil Supplies & Consumer Affairs Department |
| Extra No.69      | 07-07-2018  | Home Department                                    |

| <b>Extra No.</b> | <b>Date</b> | <b>Department</b>                                  |
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| Extra No.70      | 07-07-2018  | Home Department                                    |
| Extra No.71      | 07-07-2018  | Home Department                                    |
| Extra No.72      | 09-07-2018  | Forest & Environment Department                    |
| Extra No.73      | 09-07-2018  | Forest & Environment Department                    |
| Extra No.74      | 09-07-2018  | Forest & Environment Department                    |
| Extra No.75      | 10-07-2018  | Labour & Employment Department                     |
| Extra No.76      | 11-07-2018  | Labour & Employment Department                     |
| Extra No.77      | 11-07-2018  | Home Department                                    |
| Extra No.78      | 12-07-2018  | Finance Department                                 |
| Extra No.79      | 17-07-2018  | Finance Department                                 |
| Extra No.80      | 25-07-2018  | Health & Family Welfare Department                 |
| Extra No.81      | 26-07-2018  | Tribal Development Department                      |
| Extra No.82      | 30-07-2018  | Forest & Environment Department                    |
| Extra No.83      | 30-07-2018  | Legal Department                                   |
| Extra No.84      | 31-07-2018  | Ports & Transport Department                       |
| Extra No.85      | 01-08-2018  | Ports & Transport Department                       |
| Extra No.86      | 06-08-2018  | Legal Department                                   |
| Extra No.87      | 06-08-2018  | Food, Civil Supplies & Consumer Affairs Department |
| Extra No.88      | 07-08-2018  | Forest & Environment Department                    |
| Extra No.89      | 08-08-2018  | Home Department                                    |
| Extra No.90      | 09-08-2018  | Forest & Environment Department                    |
| Extra No.91      | 14-08-2018  | Legal Department                                   |
| Extra No.92      | 18-08-2018  | Food, Civil Supplies & Consumer Affairs Department |
| Extra No.93      | 23-08-2018  | Legal Department                                   |



| <b>Extra No.</b> | <b>Date</b> | <b>Department</b>                                  |
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| Extra No.94      | 05-09-2018  | Home Department                                    |
| Extra No.95      | 05-09-2018  | Ports & Transport Department                       |
| Extra No.96      | 05-09-2018  | Legal Department                                   |
| Extra No.97      | 06-09-2018  | General Administration Department                  |
| Extra No.98      | 07-09-2018  | Food, Civil Supplies & Consumer Affairs Department |
| Extra No.99      | 11-09-2018  | Forest & Environment Department                    |
| Extra No.100     | 12-09-2018  | Ports & Transport Department                       |
| Extra No.101     | 12-09-2018  | Legal Department                                   |
| Extra No.102     | 12-09-2018  | Woman & Child Development Department               |
| Extra No.103     | 14-09-2018  | Food, Civil Supplies & Consumer Affairs Department |
| Extra No.104     | 17-09-2018  | Ports & Transport Department                       |
| Extra No.105     | 20-09-2018  | Legal Department                                   |
| Extra No.106     | 26-09-2018  | Food, Civil Supplies & Consumer Affairs Department |
| Extra No.107     | 26-09-2018  | Labour & Employment Department                     |
| Extra No.108     | 03-10-2018  | Health & Family Welfare Department                 |
| Extra No.109     | 05-10-2018  | Ports & Transport Department                       |
| Extra No.110     | 10-10-2018  | Finance Department                                 |
| Extra No.111     | 12-10-2018  | Finance Department                                 |
| Extra No.112     | 17-10-2018  | Forest & Environment Department                    |
| Extra No.113     | 17-10-2018  | Forest & Environment Department                    |
| Extra No.114     | 17-10-2018  | Home Department                                    |
| Extra No.115     | 23-10-2018  | Forest & Environment Department                    |
| Extra No.116     | 23-10-2018  | Forest & Environment Department                    |
| Extra No.117     | 23-10-2018  | Forest & Environment Department                    |

| <b>Extra No.</b> | <b>Date</b> | <b>Department</b>                                  |
|------------------|-------------|--|
| Extra No.118     | 23-10-2018  | Forest & Environment Department                    |
| Extra No.119     | 24-10-2018  | Food, Civil Supplies & Consumer Affairs Department |
| Extra No.120     | 26-10-2018  | Forest & Environment Department                    |
| Extra No.121     | 26-10-2018  | Ports & Transport Department                       |
| Extra No.122     | 29-10-2018  | Legal Department                                   |
| Extra No.123     | 30-10-2018  | Legal Department                                   |
| Extra No.124     | 30-10-2018  | Forest & Environment Department                    |
| Extra No.125     | 30-10-2018  | Legal Department                                   |
| Extra No.126     | 30-10-2018  | Legal Department                                   |
| Extra No.127     | 01-11-2018  | Food, Civil Supplies & Consumer Affairs Department |
| Extra No.128     | 01-11-2018  | Food, Civil Supplies & Consumer Affairs Department |
| Extra No.129     | 01-11-2018  | Forest & Environment Department                    |
| Extra No.130     | 01-11-2018  | Forest & Environment Department                    |
| Extra No.131     | 13-11-2018  | Home Department                                    |
| Extra No.132     | 13-11-2018  | Food, Civil Supplies & Consumer Affairs Department |
| Extra No.133     | 19-11-2018  | Legal Department                                   |
| Extra No.134     | 20-11-2018  | Forest & Environment Department                    |
| Extra No.135     | 26-11-2018  | Home Department                                    |
| Extra No.136     | 26-11-2018  | Industries & Mines Department                      |
| Extra No.137     | 26-11-2018  | Home Department                                    |
| Extra No.138     | 26-11-2018  | Energy & Petrochemicals Department                 |
| Extra No.139     | 26-11-2018  | Ports & Transport Department                       |
| Extra No.140     | 27-11-2018  | Home Department                                    |
| Extra No.141     | 28-11-2018  | Home Department                                    |

| <b>Extra No.</b>    | <b>Date</b>       | <b>Department</b>   |
|---------------------|-------------------|---|
| <b>Extra No.142</b> | <b>29-11-2018</b> | <b>Food, Civil Supplies &amp; Consumer Affairs Department</b> |
| <b>Extra No.143</b> | <b>29-11-2018</b> | <b>Food, Civil Supplies &amp; Consumer Affairs Department</b> |
| <b>Extra No.144</b> | <b>04-12-2018</b> | <b>Health &amp; Family Welfare Department</b>                 |
| <b>Extra No.145</b> | <b>07-12-2018</b> | <b>Home Department</b>  |
| <b>Extra No.146</b> | <b>17-12-2018</b> | <b>Legal Department</b>                                       |
| <b>Extra No.147</b> | <b>17-12-2018</b> | <b>Other</b>  |
| <b>Extra No.148</b> | <b>19-12-2018</b> | <b>Labour &amp; Employment Department</b>                     |
| <b>Extra No.149</b> | <b>19-12-2018</b> | <b>Forest &amp; Environment Department</b>                    |
| <b>Extra No.150</b> | <b>24-12-2018</b> | <b>Forest &amp; Environment Department</b>                    |
| <b>Extra No.151</b> | <b>29-12-2018</b> | <b>Food, Civil Supplies &amp; Consumer Affairs Department</b> |



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# The Gujarat Government Gazette

## EXTRAORDINARY

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THURSDAY, JANUARY 4, 2018/PAUSA 14, 1939

Separate paging is given to this Part in order that it may be filed as a Separate Compilation.

### PART IV-A

Rules and Orders (Other than those published in Parts I, I-A, and I-L) made  
by the Government of Gujarat under the Central Acts

#### HOME DEPARTMENT

#### Notification

Sachivalaya, Gandhinagar, 18<sup>th</sup> December, 2017.

#### The Manoeuvres Field Firing And Artillery Practice Act, 1938.

**No.GG/71/2017/FAP/122010/185-M.**--In exercise of the powers conferred by sub-section (1) of Section 9 of the Manoeuvres Field Firing and Artillery Practice Act, 1938 (V- of 1938) the Government of Gujarat hereby re-notify the Notification No-GG/89/2012/FAP/122010/185/M dated 15<sup>th</sup> December, 2012 and Notifications issued thereunder from time to time and re-define the area specified below as the area within which, carrying out of Field Firing and Artillery Practice may be authorised for a period from 01<sup>st</sup> January, 2018 to 31<sup>st</sup> December, 2022.

| Name of<br>taluka/Village | survey no/block<br>no. | Approximate<br>Area |      |      |
|---------------------------|------------------------|---------------------|------|------|
|                           |                        | Hect.               | Area | S.M. |
| 1.                        | 2.                     | 3.                  | 4.   | 5.   |
| Datiwada                  | New-854<br>(Old -227/C | 100                 | 75   | 22   |

By order and in the name of the Governor of Gujarat,

**K. D. SUTHAR,**

Joint Secretary to Government.



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### PART IV-A

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by the Government of Gujarat under the Central Acts

#### HEALTH AND FAMILY WELFARE DEPARTMENT

##### Notification

Sachivalaya, Gandhinagar, 30<sup>th</sup> December, 2017.

##### Constitution of India.

**No.GP/61/MKM/102016/158111/S** :- In exercise of the powers conferred by the proviso to article 309 of the Constitution of India. the Governor of Gujarat hereby makes following rules further to amend the Laboratory Assistant, Class III in the subordinate service of the Commissionerate of Health, Medical Services and Medical Education and Research, Recruitment Rules, 2016, namely:-

1. These rules may be called the Laboratory Assistant, Class III, in the subordinate service of the Commissionerate of Health, Medical Services and Medical Education and Research, Recruitment (2<sup>nd</sup> Amendment) Rules, 2017.
2. In the Laboratory Assistant, Class III, in the subordinate service of the Commissionerate of Health, Medical Services and Medical Education and Research, Recruitment Rules, 2016, in rule 3.-
  - (1) In sub-rule (a), for the figures and words "34 years" the figures and words "33 years" shall be substituted.
  - (2) clause (ii) of sub-rule (b) shall be deleted.

By order and in the name of the Governor of Gujarat,

**K. R. MAKWANA,**  
Under Secretary to Government.



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# The Gujarat Government Gazette

## EXTRAORDINARY

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### PART IV-A

Rules and Orders (Other than those published in Parts I, I-A, and I-L) made  
by the Government of Gujarat under the Central Acts

#### LABOUR AND EMPLOYMENT DEPARTMENT

#### Notification

Sachivalaya, Gandhinagar, 2<sup>nd</sup> January, 2018.

#### FACTORIES ACT, 1948.

**No: KHR/2018/1/FAC/142017/477446/M(3) :-** WHEREAS, certain draft rules were published as required by sub-section (1) of section 115 read with section 112 of the Factories Act, 1948 (LXIII of 1948) at pages 145-1 and 145-2 of the Gujarat Government Gazette, Extraordinary, Part IV-A, dated the, 20<sup>th</sup> September, 2017, under the Government Notification, Labour and Employment Department No.KHR-2017-136-FAC-142017-477446-M(3), dated 18<sup>th</sup> September, 2017, inviting objections and suggestions from all persons likely to be affected thereby within a period of forty five days from the date of publication of the said notification in the Official Gazette.

AND WHEREAS, no objection or suggestion has been received by the Government in respect to said draft notification.

NOW THEREFORE, in exercise of the powers conferred by sub-section (1) of section 6 read with section 112 of the Factories Act, 1948 (LXIII of 1948), the Government of Gujarat hereby makes the following rules further to amend the Gujarat Factories rules, 1963, namely:-

1. These rules may be called the Gujarat Factories (Fourth Amendment) Rules, 2017.
2. In the Gujarat Factories Rules, 1963, for existing rule 8A the following rule shall be substituted, namely:-

“8A. When licence deemed to be granted or renewed.-

Where an application for grant or renewal of licence is duly made in accordance with these rules, the factory in respect of which the licence is to be granted or renewed, as the case may be, shall be granted or renewed as the case may be, deemed to be duly licensed until such licence is granted or renewed until no order is communicated to such person or an intimation regarding that the grant or renewal of the licence had been refused is communicated to such person within ninety days.

*Explanation :-* (1) For the purpose of this rule an application for the grant or renewal of a license shall be deemed to have been duly made only if it is in the form specified there for and is filled in with all relevant particulars and further is accompanied by a treasury receipt, a crossed cheque, a crossed Indian

Postal Order or as the case may be, an invoice for book adjustment, for payment of the fees in accordance with the Schedule annexed to Rule 4.

(2) Ninty days shall be calculated from date of expiry of the licence.”

By order and in the name of the Governor of Gujarat,

**R. H. VASAVA,**

Deputy Secretary to Government.

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GOVERNMENT CENTRAL PRESS, GANDHINAGAR.



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## EXTRAORDINARY

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### PART IV-A

Rules and Orders (Other than those published in Parts I, I-A, and I-L) made  
by the Government of Gujarat under the Central Acts

FOOD, CIVIL SUPPLIES AND CONSUMER AFFAIRS DEPARTMENT

### NOTIFICATION

Sachivalaya, Gandhinagar, 16<sup>th</sup> January, 2018.

**National Food Security Act, 2013.**

**No. GTH/2018/2/PDS/10.2016/2085/C-1 :-** WHEREAS certain draft rules were published as required by clauses (f) of sub-section (2) of section 40 read with sub-sections (5) of section 16 of the National Food Security Act, 2013 (20 of 2013) at pages 149-1 to 149-2 in the Gujarat Government Gazette Extraordinary part IV-A dated 26<sup>th</sup> September, 2017, under the Government Notification Food, civil Supplies And Consumer Affairs Department, NO, GTH/2017/24/PDS /10.2016/2085/C-1, inviting objections or suggestions from all persons likely to be affected thereby within a period of thirty days from the date of publication of this notification in the official Gazette.

NOW, WHEREAS, no objections or suggestions have been received from the public on the said draft rules;

NOW, THEREFORE, In exercise of the powers conferred by clause (f) of sub-section (2) of section 40 read with sub-section (5) of section 16 of the National Food Security Act, 2013 (20 of 2013), the Government of Gujarat hereby makes the following rules, further to amend the Gujarat State Food Commission (Procedure for Meetings and its Powers) Rules, 2016 namely :-

1. These rules may be called the Gujarat State Food Commission (Procedure for Meetings and its Powers) (Amendment) Rules, 2018.

2. In the Gujarat State Food Commission (Procedure for Meetings and its Powers) Rules, 2016, in rule 4, in sub rule (2), for the word "Ahmedabad", the word "Gandhinagar" shall be substituted.

By order and in the name of the Governor of Gujarat,

**S. G. BHATT,**

Deputy Secretary to Government.





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# The Gujarat Government Gazette

## EXTRAORDINARY

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### PART IV-A

**Rules and Orders (Other than those published in Parts I, I-A, and I-L) made  
by the Government of Gujarat under the Central Acts**

### GUJARAT LEGISLATURE SECRETARIAT,

### NOTIFICATION

**VITHTHALBHAI PATEL BHAVAN, Gandhinagar, 5<sup>th</sup> January, 2018.**

#### **Constitution of India.**

**No.-GVS/996/E/25(21)/56 :-** In exercise of the powers conferred by clause (3) of article 187 of the Constitution of India, the Governor of Gujarat, after consultation with the Speaker of the Gujarat Legislative Assembly, hereby makes the following rules further to amend the Gujarat Legislature Secretarial Staff (Recruitment and Conditions of Service) Rules, 1974, namely :-

1. These rules may be called the Gujarat Legislature Secretarial Staff (Recruitment and Conditions of Service) (Amendment) Rules, 2018.

2. In the Gujarat Legislature Secretarial Staff (Recruitment and Conditions of Service ) Rules, 1974, in rule 13, in sub rule- 4, in Schedule-II,- under the heading "(A) Papers", -

(i.) in paper-II, for the words " to transcribe on the typewriter ", the words "to make Data-Entry in the Computer" shall be substituted.

(ii.) in paper-III, -

(a) in title, for the word " Typewriting ", the words " Data-Entry in the Computer " shall be substituted.

(b) in the first para, for the words " to type ", the words "to make Data-Entry in the Computer " shall be substituted.

By order and in the name of the Governor of Gujarat,

**REETA MEHTA,**

Deputy Secretary,

Gujarat Legislature Secretariat.

ગુજરાત વિધાનસભા સચિવાલય

અધિસૂચના

વિક્કલભાઈ પટેલ ભવન, ગાંધીનગર, પંખી જાન્યુઆરી, ૨૦૧૮.

ભારતનું બંધારણ.

ક્રમાંક:- ગવસ/૯૯૬/મ/૨૫(૨૧)પક:- ભારતના બંધારણની કલમ-૧૮૭ ના ખંડ(૩) થી મળેલી સત્તાની રૂએ, ગુજરાતના રાજ્યપાલશ્રી, ગુજરાત વિધાનસભાના અધ્યક્ષશ્રી સાથે પરામર્શ કરીને ગુજરાત વિધાનસભા સચિવીય કર્મચારીગણ (ભરતી અને નોકરીની શરતો) બાબતના નિયમો, ૧૯૭૪ને વધુ સુધારવા નીચેના નિયમો કરે છે, એટલે કે:-

૧. આ નિયમોને ગુજરાત વિધાનસભા સચિવીય કર્મચારીગણ (ભરતી અને નોકરીની શરતો) (સુધારો) બાબતના નિયમો, ૨૦૧૮ કહેવા.
૨. ગુજરાત વિધાનસભા સચિવીય કર્મચારીગણ (ભરતી અને નોકરીની શરતો) બાબતના નિયમો, ૧૯૭૪માં, નિયમ-૧૩ના, પેટા નિયમ-૪ની, અનુસૂચિ-૨માં, મથાળા " (ક) પ્રશ્નપત્રો" હેઠળ,
  - (૧) પ્રશ્નપત્ર-૨ માં "ટાઇપરાઇટર ઉપર ટાઇપ કરવું" (to transcribe on the typewriter) શબ્દોના સ્થાને "કમ્પ્યુટરમાં ડેટાએન્ટ્રી કરવી" એ શબ્દો દાખલ કરવામાં આવશે.
  - (૨) પ્રશ્નપત્ર-૩ માં
    - (ક) શીર્ષકમાં "ટાઇપરાઇટર" શબ્દના સ્થાને "કમ્પ્યુટરમાં ડેટા-એન્ટ્રી" શબ્દો દાખલ કરવામાં આવશે.
    - (ખ) પ્રથમ ફકરામાં, "ટાઇપ કરવું" એ શબ્દોના સ્થાને "કમ્પ્યુટરમાં ડેટા-એન્ટ્રી કરવી" શબ્દો દાખલ કરવામાં આવશે.

ગુજરાત રાજ્યપાલશ્રીના હુકમથી અને તેમના નામે,

રીટા મહેતા,

નાયબ સચિવ,

ગુજરાત વિધાનસભા સચિવાલય

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सत्यमेव जयते

# The Gujarat Government Gazette

## EXTRAORDINARY

PUBLISHED BY AUTHORITY

Vol. LIX ]

MONDAY, JANUARY 22, 2018/MAGHA 2, 1939

Separate paging is given to this Part in order that it may be filed as a Separate Compilation.

### PART IV-A

**Rules and Orders (Other than those published in Parts I, I-A, and I-L) made  
by the Government of Gujarat under the Central Acts**

#### HOME DEPARTMENT

#### Notification

Sachivalaya, Gandhinagar, 5<sup>th</sup> January, 2018.

#### Constitution of India.

**No. G/G/1/2018/FSL/102008/1902/A:-** In exercise of the powers conferred by the proviso to article 309 of the Constitution of India and in supersession of all the rules made in this behalf, the Governor of Gujarat hereby makes the following rules to provide for regulating recruitment to the post of Deputy Chief State Examiner of Questioned Documents, Class II, in the Questioned Documents Division, in the General State Service, under the Directorate of Forensic Science, Gujarat State, namely:-

1. These rules may be called the Deputy Chief State Examiner of Questioned Documents, Class II, in the Questioned Document Division, Recruitment Rules, 2018.
2. Appointment to the post of Deputy Chief State Examiner of Questioned Documents, Class II, in the Questioned Document Division, in the General State Service under the Directorate of Forensic Science, shall be made either:-

- (a) by promotion of a person of proved merit and efficiency from amongst the persons, who,-
  - (i) have worked for not less than seven years in the cadre of Assistant Examiner of Questioned Documents, Class III, in the Questioned Document Division, in the subordinate service under the Directorate of Forensic Science, Gujarat State;
  - (ii) have passed the qualifying examination for computer knowledge in accordance with the provisions of the Gujarat Civil Services Computer Competency Training and Examination Rules, 2006:

provided that where the appointing authority is satisfied that a person having experience specified in sub clause (i) above is not available for promotion and that it is necessary in the public interest to fill up the post by promotion even of a person having experience for a lesser period; it may, for reasons to be recorded in writing, promote such person who possesses the experience of a period not less than two-thirds of the period specified in sub Clause (i) above; or

- (b) by direct selection:

3. To be eligible for appointment by direct selection to the post mentioned in rule 2, a candidate shall,-
- (a) not be more than 42 years of age:  
provided that the upper age limit may be relaxed in favour of a candidate who is already in the service of the Government of Gujarat in accordance with the provisions of the Gujarat Civil Services Classification and Recruitment (General) Rules, 1967:  
provided further that nothing contained in clause (b) of sub-rule (9) of rule 8 of the Gujarat Civil Services Classification and Recruitment (General) Rules, 1967 shall be applicable in so far as the relaxation of upper age limit as prescribed above is concerned;
- (b) possess a M.Sc. (Forensic Science) degree or Post graduate degree in Physics/ Chemistry/ Forensic Science or post-graduation diploma in the Forensic Document Examination obtained from any of the Universities established or incorporated by or under the Central or a State Act in India; or any other educational institutions recognised as such or declared to be deemed as a University under section 3 of the University Grants Commission Act, 1956; and
- (c) (i) have about five year's experience of Scientific Examination of Questioned Documents on the post not below the rank of Assistant Examiner of Question Documents, Class III, in the subordinate services, under the Directorate of Forensic Science; or  
(ii) have about five year's experience in the field of Scientific Examination of Questioned Documents in the State or Central Forensic Science Laboratory or any other such Institute on the post which can be considered equivalent to the post not below the rank of the Assistant Examiner of Questioned Documents, Class III, in the Questioned Document Division in the subordinate services, under the Directorate of Forensic Science, Gujarat State;
- (d) possess the basic knowledge of computer application as prescribed in the Gujarat Civil Services Classification and Recruitment (General) Rules, 1967; and
- (e) Possess adequate knowledge of Gujarati or Hindi or both.
4. The candidate appointed by direct selection shall be on probation for a period of two years.
5. The candidate appointed by direct selection shall, during his probation period be require to undergo pre-service training and pass the post-training examination in accordance with the provisions of the Gazetted Officers (Pre-Service Training and Examination) Rules, 1970.
6. The candidate appointed by direct selection shall, during his probation period be require to passing the qualifying examination for computer knowledge in accordance with the provision of the Gujarat Civil Services Computer Competency Training and Examination Rules 2006.
7. The candidate appointed by direct selection shall be require to pass an examination in Hindi or Gujarati or both in accordance with the rules prescribed by the Government.
8. The candidate appointed by direct selection shall be required to undergo such training and to pass such examination as may be prescribed by the Government.
9. The candidate appointed by direct selection shall be required to furnish a security and surety bond in such form, for such amount and for such period as may be prescribed by the Government.

By order and in the name of the Governor of Gujarat,

**D. R. BHAMMAR,**

Deputy Secretary to Government.

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# The Gujarat Government Gazette

## EXTRAORDINARY

PUBLISHED BY AUTHORITY

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TUESDAY, JANUARY 23, 2018/MAGHA 3, 1939

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### PART IV-A

Rule and Orders (Other than those published in Parts I, I-A, and I-L) made  
by the Government of Gujarat under the Central Acts

#### AGRICULTURE, FARMERS WELFARE AND CO-OPERATIVE DEPARTMENT

#### Notification

Sachivalaya, Gandhinagar, 11<sup>th</sup> January, 2018

#### Insecticide Act, 1968.

**NO.GHKH-1-2018-IST-102016-64-K.6:**— In exercise of the powers conferred by Sub- section (1) of section 20 of the Insecticide Act, 1968 ( 46 of 1968) and in supersession of all the notifications issued in this behalf, the Government of Gujarat hereby appoints the officers specified in column 2 of the schedule appended hereto to be Insecticide Inspectors for the purpose of the aforesaid Act and defines the local areas specified against each of them in column 3 of the said Schedule within which each of such Inspectors shall exercise their jurisdictions.

| Sr.No. | Designation of Officers   | Local Area of Jurisdiction    |
|--------|---|-------------------------------|
| 1      | 2   | 3                             |
| 1      | Deputy Director of Agriculture ( Quality Control), Office of the Directorate of Agriculture, Gujarat State, Gandhinagar | Whole of the State of Gujarat |
| 2      | Assistant Director of Agriculture (Vigilance ), Office of the Directorate of Agriculture, Gujarat State, Gandhinagar    | Whole of the State of Gujarat |
| 3      | Assistant Director of Agriculture ( Law), Office of the Directorate of Agriculture, Gujarat State, Gandhinagar          | Whole of the State of Gujarat |
| 4      | Agriculture Officer ( Quality Control-1 ), Office of the Directorate of Agriculture, Gujarat State, Gandhinagar         | Whole of the State of Gujarat |
| 5      | Agriculture Officer ( Quality Control-2 ), Office of the Directorate of Agriculture, Gujarat State, Gandhinagar         | Whole of the State of Gujarat |
| 6      | Agriculture Officer ( Quality Control-3 ), Office of the Directorate of Agriculture, Gujarat State, Gandhinagar         | Whole of the State of Gujarat |

| <b>Sr.No.</b> | <b>Designation of Officers</b>  | <b>Local Area of Jurisdiction</b>   |
|---------------|---|---|
| <b>1</b>      | <b>2</b>  | <b>3</b>  |
| 7             | Joint Director of Agriculture (Seed), Office of the Directorate of Agriculture, Gujarat State, Gandhinagar                | Whole of the State of Gujarat   |
| 8             | Deputy Director of Agriculture (Pesticide), Office of the Directorate of Agriculture, Gujarat State, Gandhinagar          | Whole of the State of Gujarat   |
| 9             | Assistant Director of Agriculture (Insecticide Act), Office of the Directorate of Agriculture, Gujarat State, Gandhinagar | Whole of the State of Gujarat   |
| 10            | Joint Director of Agriculture (Extention), Mehsana  | Whole of the Mehsana, Banaskantha, Patan, Sabarkantha and Arvalli District                    |
| 11            | Joint Director of Agriculture (Extention), Ahmedabad  | Whole of the Ahmedabad, Gandhinagar, Kheda and Anand District                                 |
| 12            | Joint Director of Agriculture (Extention ), Vadodra   | Whole of the Vadodra, Chhotaudepur, Bharuch, Panchmahal, Dahod, Narmda and Mahisagar District |
| 13            | Joint Director of Agriculture ( Extention ), Surat  | Whole of the Surat, Valsad, Navsari, Dang and Tapi District                                   |
| 14            | Joint Director of Agriculture (Extention ), Rajkot  | Whole of the Rajkot, Jamnagar, Kutch, Surendranagar, Morbi and Devbhumi dwarka District       |
| 15            | Joint Director of Agriculture (Extention ), Junagadh  | Whole of the Junagadh, Amreli, Bhavnagar, Porbandar, Botad and Gir Somnath District           |
| 16            | Deputy Director of Agriculture (Extension), Palanpur, District: Banaskantha   | Whole of the Banaskantha District   |
| 17            | Assistant Director of Agriculture( Quality Control), Palanpur, District: Banaskantha                                      | Whole of the Banaskantha District   |
| 18            | Agriculture officer, Palanpur   | Whole Palanpur taluka of the Banaskantha District   |
| 19            | Agriculture officer, Vadgam   | Whole Vadgam taluka of the Banaskantha District   |
| 20            | Agriculture officer, Danta  | Whole Danta taluka of the Banaskantha District  |
| 21            | Agriculture officer, Dantiwada  | Whole Dantiwada taluka of the Banaskantha District  |
| 22            | Agriculture officer, Amirghadh  | Whole Amirghadh taluka of the Banaskantha District  |
| 23            | Agriculture officer, Deesa  | Whole Deesa taluka of the Banaskantha District  |
| 24            | Agriculture officer, Dhanera  | Whole Dhanera taluka of the Banaskantha District  |
| 25            | Agriculture officer, Kankarej   | Whole Kankarej taluka of the Banaskantha District   |
| 26            | Agriculture officer, Deodar   | Whole Deodar taluka of the Banaskantha District   |
| 27            | Agriculture officer, Vav  | Whole Vav taluka of the Banaskantha District  |
| 28            | Agriculture officer, Tharad   | Whole Tharad taluka of the Banaskantha District   |
| 29            | Agriculture officer, Bhabhar  | Whole Bhabhar taluka of the Banaskantha District  |
| 30            | Agriculture officer, Suigam   | Whole Suigam taluka of the Banaskantha District   |

| Sr.No. | Designation of Officers   | Local Area of Jurisdiction                       |
|--------|---|--|
| 1      | 2   | 3  |
| 31     | Agriculture officer, Lakhni   | Whole Lakhni taluka of the Banaskantha District  |
| 32     | Deputy Director of Agriculture ( Extension ), Mehsana                                   | Whole of the Mehsana District                    |
| 33     | Assistant Director of Agriculture (Quality Control), Mehsana                            | Whole of the Mehsana District                    |
| 34     | Agriculture officer, Mehsana  | Whole Mehsana taluka of the Mehsana District     |
| 35     | Agriculture officer, Kadi   | Whole Kadi taluka of the Mehsana District        |
| 36     | Agriculture officer, Becharaji  | Whole Becharaji taluka of the Mehsana District   |
| 37     | Agriculture officer, Visnagar   | Whole Visnagar taluka of the Mehsana District    |
| 38     | Agriculture officer, Kheralu  | Whole Kheralu taluka of the Mehsana District     |
| 39     | Agriculture officer, Unjha  | Whole Unjha taluka of the Mehsana District       |
| 40     | Agriculture officer, Satlasana  | Whole Satlasana taluka of the Mehsana District   |
| 41     | Agriculture officer, Vijapur  | Whole Vijapur taluka of the Mehsana District     |
| 42     | Agriculture officer, Vadnagar   | Whole Vadnagar taluka of the Mehsana District    |
| 43     | Agriculture officer, Jotana   | Whole Jotana taluka of the Mehsana District      |
| 44     | Deputy Director of Agriculture (Extension ), Patan                                      | Whole of the Patan District                      |
| 45     | Assistant Director of Agriculture( Quality Control), Patan                              | Whole of the Patan District                      |
| 46     | Agriculture officer, Patan  | Whole Patan taluka of Patan District             |
| 47     | Agriculture officer, Siddhpur   | Whole Siddhpur taluka of Patan District          |
| 48     | Agriculture officer, Chanasma   | Whole Chanasma taluka of Patan District          |
| 49     | Agriculture officer, Sami   | Whole Sami taluka of Patan District              |
| 50     | Agriculture officer, Santalpur  | Whole Santalpur taluka of Patan District         |
| 51     | Agriculture officer, Radhanpur  | Whole Radhanpur taluka of Patan District         |
| 52     | Agriculture officer, Harij  | Whole Harij taluka of Patan District             |
| 53     | Agriculture officer, Saraswati  | Whole Saraswati taluka of Patan District         |
| 54     | Agriculture Officer, Shankheshwar   | Whole Shankheshwar taluka of Patan District      |
| 55     | Deputy Director of Agriculture ( Extension ), Himmatnagar, District: Sabarkantha        | Whole of the Sabarkantha District                |
| 56     | Assistant Director of Agriculture (Quality Control), Himmatnagar, District: Sabarkantha | Whole of the Sabarkantha District                |
| 57     | Agriculture officer, Himmatnagar  | Whole Himmatnagar taluka of Sabarkantha District |
| 58     | Agriculture officer, Idar   | Whole Idar taluka of Sabarkantha District        |
| 59     | Agriculture officer, Vadali   | Whole Vadali taluka of Sabarkantha District      |
| 60     | Agriculture officer, Khedbrahma   | Whole Khedbrahma taluka of Sabarkantha District  |
| 61     | Agriculture officer, Poshina  | Whole Poshina taluka of Sabarkantha District     |
| 62     | Agriculture officer, Vijaynagar   | Whole Vijaynagar taluka of Sabarkantha District  |
| 63     | Agriculture officer, Talod  | Whole Talod taluka of Sabarkantha District       |
| 64     | Agriculture officer, Prantij  | Whole Prantij taluka of Sabarkantha District     |
| 65     | Deputy Director of Agriculture ( Extension), Modasa, District: Arvalli                  | Whole of the Arvalli District                    |

| Sr.No. | Designation of Officers   | Local Area of Jurisdiction                            |
|--------|---|---|
| 1      | 2   | 3   |
| 66     | Assistant Director of Agriculture, Modasa C/o Office of the Deputy Director of Agriculture (Extension), Modasa, District: Arvalli | Whole of the Arvalli District                         |
| 67     | Agriculture officer, Bhiloda  | Whole Bhiloda taluka of the Arvalli District          |
| 68     | Agriculture officer, Meghraj  | Whole Meghraj taluka of the Arvalli District          |
| 69     | Agriculture officer, Modasa   | Whole Modasa taluka of the Arvalli District           |
| 70     | Agriculture officer, Dhansura   | Whole Dhansura taluka of the Arvalli District         |
| 71     | Agriculture officer, Malpur   | Whole Malpur taluka of the Arvalli District           |
| 72     | Agriculture officer, Bayad  | Whole Bayad taluka of the Arvalli District            |
| 73     | Deputy Director of Agriculture ( Extension ), Ahmedabad   | Whole of the Ahmedabad District                       |
| 74     | Assistant Director of Agriculture (Quality Control). Ahmedabad  | Whole of the Ahmedabad District                       |
| 75     | Agriculture officer, Ahmedabad City   | Whole Ahmedabad City taluka of the Ahmedabad District |
| 76     | Agriculture officer, Daskroi  | Whole Daskroi taluka of the Ahmedabad District        |
| 77     | Agriculture officer, Dholka   | Whole Dholka taluka of the Ahmedabad District         |
| 78     | Agriculture officer, Dhandhuka  | Whole Dhandhuka taluka of the Ahmedabad District      |
| 79     | Agriculture officer, Bavla  | Whole Bavla taluka of the Ahmedabad District          |
| 80     | Agriculture officer, Viramgam   | Whole Viramgam taluka of the Ahmedabad District       |
| 81     | Agriculture officer, Mandal   | Whole Mandal taluka of the Ahmedabad District         |
| 82     | Agriculture officer, Detroj-Rampura   | Whole Detroj-Rampura taluka of the Ahmedabad District |
| 83     | Agriculture officer, Sanand   | Whole Sanand taluka of the Ahmedabad District         |
| 84     | Agriculture officer, Dholera  | Whole Dholera taluka of the Ahmedabad District        |
| 85     | Deputy Director of Agriculture (Extension ), Gandhinagar  | Whole of the Gandhinagar District                     |
| 86     | Assistant Director of Agriculture (Quality Control), Gandhinagar  | Whole of the Gandhinagar District                     |
| 87     | Agriculture officer, Gandhinagar  | Whole Gandhinagar taluka of the Gandhinagar District  |
| 88     | Agriculture officer, Dahegam  | Whole Dahegam taluka of the Gandhinagar District      |
| 89     | Agriculture officer, Kalol  | Whole Kalol taluka of the Gandhinagar District        |
| 90     | Agriculture officer, Mansa  | Whole Mansa taluka of the Gandhinagar District        |
| 91     | Deputy Director of Agriculture (Extension ), Nadiyad, District: Kheda   | Whole of the Kheda District                           |
| 92     | Assistant Director of Agriculture (Quality Control), Nadiyad, District: Kheda   | Whole of the Kheda District                           |
| 93     | Agriculture officer, Nadiyad  | Whole Nadiyad taluka of the Kheda District            |
| 94     | Agriculture officer, Mahudha  | Whole Mahudha taluka of the Kheda District            |



| <b>Sr.No.</b> | <b>Designation of Officers</b>  | <b>Local Area of Jurisdiction</b>                  |
|---------------|---|--|
| <b>1</b>      | <b>2</b>  | <b>3</b>   |
| 95            | Agriculture officer, Matar  | Whole Matar taluka of the Kheda District           |
| 96            | Agriculture officer, Mahemdavad   | Whole Mahemdavad taluka of the Kheda District      |
| 97            | Agriculture officer, Kheda  | Whole Kheda taluka of the Kheda District           |
| 98            | Agriculture officer, Kapadvanj  | Whole Kapadvanj taluka of the Kheda District       |
| 99            | Agriculture officer, Kathlal  | Whole Kathlal taluka of the Kheda District         |
| 100           | Agriculture officer, Thasra   | Whole Thasra taluka of the Kheda District          |
| 101           | Agriculture officer, Galteshwar   | Whole Galteshwar taluka of the Kheda District      |
| 102           | Agriculture officer, Vaso   | Whole Vaso taluka of the Kheda District            |
| 103           | Deputy Director of Agriculture (Extension), Anand   | Whole of the Anand District                        |
| 104           | Assistant Director of Agriculture (Quality Control), Anand  | Whole of the Anand District                        |
| 105           | Agriculture officer, Anand  | Whole Anand taluka of the Anand District           |
| 106           | Agriculture officer, Umreth   | Whole Umreth taluka of the Anand District          |
| 107           | Agriculture officer, Borsad   | Whole Borsad taluka of the Anand District          |
| 108           | Agriculture officer, Anklav   | Whole Anklav taluka of the Anand District          |
| 109           | Agriculture officer, Petlad   | Whole Petlad taluka of the Anand District          |
| 110           | Agriculture officer, Sojitra  | Whole Sojitra taluka of the Anand District         |
| 111           | Agriculture officer, Khambhat   | Whole Khambhat taluka of the Anand District        |
| 112           | Agriculture officer, Tarapur  | Whole Tarapur taluka of the Anand District         |
| 113           | Deputy Director of Agriculture (Extension), Lunavada, District: Mahisagar   | Whole of the Mahisagar District                    |
| 114           | Assistant Director of Agriculture, Lunavada C/o Office of the Deputy Director of Agriculture ( Extension ), Lunavada, District: Mahisagar | Whole of the Mahisagar District                    |
| 115           | Agriculture officer, Lunavada   | Whole Lunavada taluka of the Mahisagar District    |
| 116           | Agriculture officer, Santrampur   | Whole Santrampur taluka of the Mahisagar District  |
| 117           | Agriculture officer, Kadana   | Whole Kadana taluka of the Mahisagar District      |
| 118           | Agriculture officer, Khanpur  | Whole Khanpur taluka of the Mahisagar District     |
| 119           | Agriculture officer, Balasinor  | Whole Balasinor taluka of the Mahisagar District   |
| 120           | Agriculture officer, Virpur   | Whole Virpur taluka of the Mahisagar District      |
| 121           | Deputy Director of Agriculture (Extension ), Godhra, District: Panchmahal   | Whole of the Panchmahal District                   |
| 122           | Assistant Director of Agriculture (Quality Control), Godhra, District: Panchmahal   | Whole of the Panchmahal District                   |
| 123           | Agriculture officer, Godhra   | Whole Godhra taluka of the Panchmahal District     |
| 124           | Agriculture officer, MorvaHadaf   | Whole MorvaHadaf taluka of the Panchmahal District |
| 125           | Agriculture officer, Shahera  | Whole Shahera taluka of the Panchmahal District    |
| 126           | Agriculture officer, Halol  | Whole Halol taluka of the Panchmahal District      |

| Sr.No. | Designation of Officers  | Local Area of Jurisdiction                              |
|--------|--|---|
| 1      | 2  | 3   |
| 127    | Agriculture officer, Kalol   | Whole Kalol taluka of the Panchmahal District           |
| 128    | Agriculture officer, Jambughoda  | Whole Jambughoda taluka of the Panchmahal District      |
| 129    | Agriculture officer, Ghoghamba   | Whole Ghoghamba taluka of the Panchmahal District       |
| 130    | Deputy Director of Agriculture (Extension ), Dahod   | Whole of the Dahod District                             |
| 131    | Assistant Director of Agriculture (Quality Control), Dahod   | Whole of the Dahod District                             |
| 132    | Agriculture officer, Dahod   | Whole Dahod taluka of the Dahod District                |
| 133    | Agriculture officer, Zalod   | Whole Zalod taluka of the Dahod District                |
| 134    | Agriculture officer, Fatepura  | Whole Fatepura taluka of the Dahod District             |
| 135    | Agriculture officer, Garbada   | Whole Garbada taluka of the Dahod District              |
| 136    | Agriculture officer, Limkheda  | Whole Limkheda taluka of the Dahod District             |
| 137    | Agriculture officer, Dhanpur   | Whole Dhanpur taluka of the Dahod District              |
| 138    | Agriculture officer, Devgadhi-Baria  | Whole Devgadhi-Baria taluka of the Dahod District       |
| 139    | Agriculture officer, Sanjeli   | Whole Sanjeli taluka of the Dahod District              |
| 140    | Deputy Director of Agriculture (Extension), Vadodara   | Whole of the Vadodara District                          |
| 141    | Assistant Director of Agriculture (Quality Control), Vadodara  | Whole of the Vadodara District                          |
| 142    | Agriculture officer, Vadodara  | Whole Vadodara taluka of the Vadodara District          |
| 143    | Agriculture officer, Vaghodia  | Whole Vaghodia taluka of the Vadodara District          |
| 144    | Agriculture officer, Savli   | Whole Savli taluka of the Vadodara District             |
| 145    | Agriculture officer, Dabhoi  | Whole Dabhoi taluka of the Vadodara District            |
| 146    | Agriculture officer, Shinor  | Whole Shinor taluka of the Vadodara District            |
| 147    | Agriculture officer, Padra   | Whole Padra taluka of the Vadodara District             |
| 148    | Agriculture officer, Karjan  | Whole Karjan taluka of the Vadodara District            |
| 149    | Agriculture officer, Desar   | Whole Desar taluka of the Vadodara District             |
| 150    | Deputy Director of Agriculture (Extension), Chhotaudepur   | Whole of the Chhotaudepur District                      |
| 151    | Assistant Director of Agriculture, Chhotaudepur C/o Office of the Deputy Director of Agriculture (Extension), Chhotaudepur | Whole of the Chhotaudepur District                      |
| 152    | Agriculture officer, Jetpur - Pavi   | Whole Jetpur - Pavi taluka of the Chhotaudepur District |
| 153    | Agriculture officer, Chhotaudepur  | Whole Chhotaudepur taluka of the Chhotaudepur District  |
| 154    | Agriculture officer, Kavant  | Whole Kavant taluka of the Chhotaudepur District        |
| 155    | Agriculture officer, Sankheda  | Whole Sankheda taluka of the Chhotaudepur District      |
| 156    | Agriculture officer, Nasvadi   | Whole Nasvadi taluka of the Chhotaudepur District       |
| 157    | Agriculture officer, Bodeli  | Whole Bodeli taluka of the Chhotaudepur District        |

| Sr.No. | Designation of Officers  | Local Area of Jurisdiction                      |
|--------|--|---|
| 1      | 2  | 3   |
| 158    | Deputy Director of Agriculture ( Extension ), Bharuch                            | Whole of the Bharuch District                   |
| 159    | Assistant Director of Agriculture (Quality Control) , Bharuch                    | Whole of the Bharuch District                   |
| 160    | Agriculture officer, Bharuch   | Whole Bharuch taluka of the Bharuch District    |
| 161    | Agriculture officer, Ankleshwar  | Whole Ankleshwar taluka of the Bharuch District |
| 162    | Agriculture officer, Hansot  | Whole Hansot taluka of the Bharuch District     |
| 163    | Agriculture officer, Zagadia   | Whole Zagadia taluka of the Bharuch District    |
| 164    | Agriculture officer, Valia   | Whole Valia taluka of the Bharuch District      |
| 165    | Agriculture officer, Amod  | Whole Amod taluka of the Bharuch District       |
| 166    | Agriculture officer, Jambusar  | Whole Jambusar taluka of the Bharuch District   |
| 167    | Agriculture officer, Vaghara   | Whole Vaghara taluka of the Bharuch District    |
| 168    | Agriculture officer, Netrang   | Whole Netrang taluka of the Bharuch District    |
| 169    | Deputy Director of Agriculture (Extension ), Rajpipla, District: Narmada         | Whole of the Narmada District                   |
| 170    | Assistant Director of Agriculture (Quality Control), Rajpipla, District: Narmada | Whole of the Narmada District                   |
| 171    | Agriculture officer, Nandod  | Whole Nandod taluka of the Narmda District      |
| 172    | Agriculture officer, Tilakwada   | Whole Tilakwada taluka of the Narmda District   |
| 173    | Agriculture officer, Dediapada   | Whole Dediapada taluka of the Narmda District   |
| 174    | Agriculture officer, Sagbara   | Whole Sagbara taluka of the Narmda District     |
| 175    | Deputy Director of Agriculture (Extension), Surat                                | Whole of the Surat &Tapi District               |
| 176    | Assistant Director of Agriculture (Quality Control), Surat                       | Whole of the Surat &Tapi District               |
| 177    | Agriculture officer, Surat City  | Whole Surat City taluka of the Surat District   |
| 178    | Agriculture officer, Kamrej  | Whole Kamrej taluka of the Surat District       |
| 179    | Agriculture officer, Palsana   | Whole Palsana taluka of the Surat District      |
| 180    | Agriculture officer, Bardoli   | Whole Bardoli taluka of the Surat District      |
| 181    | Agriculture officer, Mahuva  | Whole Mahuva taluka of the Surat District       |
| 182    | Agriculture officer, Mandvi  | Whole Mandvi taluka of the Surat District       |
| 183    | Agriculture officer, Olpad   | Whole Olpad taluka of the Surat District        |
| 184    | Agriculture officer, Mangrol   | Whole Mangrol taluka of the Surat District      |
| 185    | Agriculture officer, Umarapada   | Whole Umarapada taluka of the Surat District    |
| 186    | Agriculture officer, Choryasi  | Whole Choryasi taluka of the Surat District     |
| 187    | Agriculture officer, Vyara   | Whole Vyara taluka of the Tapi District         |
| 188    | Agriculture officer, Songadh   | Whole Songadh taluka of the Tapi District       |
| 189    | Agriculture officer, Uchchhal  | Whole Uchchhal taluka of the Tapi District      |
| 190    | Agriculture officer, Nizar   | Whole Nizar taluka of the Tapi District         |
| 191    | Agriculture officer, Valod   | Whole Valod taluka of the Tapi District         |
| 192    | Agriculture officer, Kukarmunda  | Whole Kukarmunda taluka of the Tapi District    |
| 193    | Agriculture officer, Dolvan  | Whole Dolvan taluka of the Tapi District        |
| 194    | Deputy Director of Agriculture ( Extension ), Valsad                             | Whole of the Valsad District                    |
| 195    | Assistant Director of Agriculture (Quality Control), Valsad                      | Whole of the Valsad District                    |

| <b>Sr.No.</b> | <b>Designation of Officers</b>                                     | <b>Local Area of Jurisdiction</b>                      |
|---------------|--|--|
| <b>1</b>      | <b>2</b>   | <b>3</b>   |
| 196           | Agriculture officer, Valsad  | Whole Valsad taluka of the Valsad District             |
| 197           | Agriculture officer, Dharampur                                     | Whole Dharampur taluka of the Valsad District          |
| 198           | Agriculture officer, Kaparada                                      | Whole Kaparada taluka of the Valsad District           |
| 199           | Agriculture officer, Pardi   | Whole Pardi taluka of the Valsad District              |
| 200           | Agriculture officer, Umargam                                       | Whole Umargam taluka of the Valsad District            |
| 201           | Agriculture officer, Vapi  | Whole Vapi taluka of the Valsad District               |
| 202           | Deputy Director of Agriculture (Extension), Navsari                | Whole of the Navsari & Dang District                   |
| 203           | Assistant Director of Agriculture(Quality Control), Navsari        | Whole of the Navsari & Dang District                   |
| 204           | Agriculture officer, Navsari                                       | Whole Navsari taluka of the Navsari district           |
| 205           | Agriculture officer, Chikhali                                      | Whole Chikhali taluka of the Navsari district          |
| 206           | Agriculture officer, Gandevi                                       | Whole Gandevi taluka of the Navsari district           |
| 207           | Agriculture officer, Vansda  | Whole Vansda taluka of the Navsari district            |
| 208           | Agriculture officer, Jalalpur                                      | Whole Jalalpur taluka of the Navsari district          |
| 209           | Agriculture officer, khergam                                       | Whole khergam taluka of the Navsari district           |
| 210           | Agriculture officer, Ahwa  | Whole Ahwa taluka of the Dang District                 |
| 211           | Agriculture officer, Subir   | Whole Subir taluka of the Dang District                |
| 212           | Agriculture officer, Vaghai  | Whole Vaghai taluka of the Dang District               |
| 213           | Deputy Director of Agriculture (Extension ), Surendranagar         | Whole of the Surendranagar District                    |
| 214           | Assistant Director of Agriculture (Quality Control), Surendranagar | Whole of the Surendranagar District                    |
| 215           | Agriculture officer, Vadhvan                                       | Whole Vadhvan taluka of the Surendranagar District     |
| 216           | Agriculture officer, Lakhtar                                       | Whole Lakhtar taluka of the Surendranagar District     |
| 217           | Agriculture officer, Limdi   | Whole Limdi taluka of the Surendranagar District       |
| 218           | Agriculture officer, Chotila                                       | Whole Chotila taluka of the Surendranagar District     |
| 219           | Agriculture officer, Sayla   | Whole Sayla taluka of the Surendranagar District       |
| 220           | Agriculture officer, Dhrangadhra                                   | Whole Dhrangadhra taluka of the Surendranagar District |
| 221           | Agriculture officer, Thangadh                                      | Whole Thangadh taluka of the Surendranagar District    |
| 222           | Agriculture officer, Dasada (Patadi)                               | Whole Dasada taluka of the Surendranagar District      |
| 223           | Agriculture officer, Muli  | Whole Muli taluka of the Surendranagar District        |
| 224           | Agriculture officer, Chuda   | Whole Chuda taluka of the Surendranagar District       |
| 225           | Deputy Director of Agriculture (Extension), Rajkot                 | Whole of the Rajkot District                           |
| 226           | Assistant Director of Agriculture (Quality Control), Rajkot        | Whole of the Rajkot District                           |
| 227           | Agriculture officer, Rajkot  | Whole Rajkot taluka of the Rajkot District             |
| 228           | Agriculture officer, Vinchhiya                                     | Whole Vinchhiya taluka of the Rajkot District          |
| 229           | Agriculture officer, Gondal  | Whole Gondal taluka of the Rajkot District             |

| Sr.No. | Designation of Officers   | Local Area of Jurisdiction   |
|--------|---|--|
| 1      | 2   | 3  |
| 230    | Agriculture officer, Jasdan   | Whole Jasdan taluka of the Rajkot District                           |
| 231    | Agriculture officer, Paddhari   | Whole Paddhari taluka of the Rajkot District                         |
| 232    | Agriculture officer, Lodhika  | Whole Lodhika taluka of the Rajkot District                          |
| 233    | Agriculture officer, Kotda-sangani  | Whole Kotda-sangani taluka of the Rajkot District                    |
| 234    | Agriculture officer, Dhoraji  | Whole Dhoraji taluka of the Rajkot District                          |
| 235    | Agriculture officer, Upleta   | Whole Upleta taluka of the Rajkot District                           |
| 236    | Agriculture officer, Jetpur   | Whole Jetpur taluka of the Rajkot District                           |
| 237    | Agriculture officer, JamKandorana   | Whole JamKandorana taluka of the Rajkot District                     |
| 238    | Deputy Director of Agriculture (Extension ), Jamnagar   | Whole of the Jamnagar District                                       |
| 239    | Assistant Director of Agriculture (Quality Control), Jamnagar   | Whole of the Jamnagar District                                       |
| 240    | Agriculture officer, Jamnagar   | Whole Jamnagar taluka of the Jamnagar District                       |
| 241    | Agriculture officer, Lalpur   | Whole Lalpur taluka of the Jamnagar District                         |
| 242    | Agriculture officer, Kalavad  | Whole Kalavad taluka of the Jamnagar District                        |
| 243    | Agriculture officer, Dhrol  | Whole Dhrol taluka of the Jamnagar District                          |
| 244    | Agriculture officer, Jodiya   | Whole Jodiya taluka of the Jamnagar District                         |
| 245    | Agriculture officer, Jamjodhpur   | Whole Jamjodhpur taluka of the Jamnagar District                     |
| 246    | Deputy Director of Agriculture ( Extension ), Khambhaliya, District: Devbhumi dwarka  | Whole of the Devbhumi dwarka District                                |
| 247    | Assistant Director of Agriculture, Khambhaliya C/o Deputy Director of Agriculture ( Extension ), Khambhaliya, District: Devbhumi dwarka | Whole of the Devbhumi dwarka District                                |
| 248    | Agriculture officer, Bhanvad  | Whole Bhanvad taluka of the the Devbhumi dwarka District             |
| 249    | Agriculture officer, Kalyanpur  | Whole Kalyanpur taluka of the the Devbhumi dwarka District           |
| 250    | Agriculture officer, Khambhaliya  | Whole Khambhaliya taluka of the the Devbhumi dwarka District         |
| 251    | Agriculture officer, Okhamandai (Dwarka)  | Whole Okhamandal (Dwarka) taluka of the the Devbhumi dwarka District |
| 252    | Deputy Director of Agriculture (Extension ), Bhuj. District: Kutch  | Whole Kutch District   |
| 253    | Assistant Director of Agriculture (Quality Control), Bhuj, District: Kutch  | Whole Kutch District   |
| 254    | Agriculture officer, Bhuj   | Whole Bhuj taluka of the Kutch District                              |
| 255    | Agriculture officer, Mandvi   | Whole Mandvi taluka of the Kutch District                            |
| 256    | Agriculture officer, Nakhatrana   | Whole Nakhatrana taluka of the Kutch District                        |
| 257    | Agriculture officer, Abdasa   | Whole Abdasa taluka of the Kutch District                            |
| 258    | Agriculture officer, Lakhpat  | Whole Lakhpat taluka of the Kutch District                           |
| 259    | Agriculture officer, Gandhidham   | Whole Gandhidham taluka of the Kutch District                        |
| 260    | Agriculture officer, Bhachau  | Whole Bhachau taluka of the Kutch District                           |
| 261    | Agriculture officer, Rapar  | Whole Rapar taluka of the Kutch District                             |

| Sr.No. | Designation of Officers  | Local Area of Jurisdiction                          |
|--------|--|---|
| 1      | 2  | 3   |
| 262    | Agriculture officer, Mundra  | Whole Mundra taluka of the Kutch District           |
| 263    | Agriculture officer, Anjar   | Whole Anjar taluka of the Kutch District            |
| 264    | Deputy Director of Agriculture (Extension ), Morbi   | Whole Morbi District                                |
| 265    | Assistant Director of Agriculture, Morbi C/o Office of the Deputy Director of Agriculture ( Extension ), Morbi | Whole Morbi District                                |
| 266    | Agriculture officer, Halvad  | Whole Halvad taluka of the Morbi District           |
| 267    | Agriculture officer, Morbi   | Whole Morbi taluka of the Morbi District            |
| 268    | Agriculture officer, Vankaner  | Whole Vankaner taluka of the Morbi District         |
| 269    | Agriculture officer, Maliya (Miyana)   | Whole Maliya (Miyana) taluka of the Morbi District  |
| 270    | Agriculture officer, Tankara   | Whole Tankara taluka of the Morbi District          |
| 271    | Deputy Director of Agriculture (Extension ), Junagadh  | Whole of the Junagadh District                      |
| 272    | Assistant Director of Agriculture (Quality Control), Junagadh  | Whole of the Junagadh District                      |
| 273    | Agriculture officer, Junagadh City   | Whole Junagadh City taluka of the Junagadh District |
| 274    | Agriculture officer, Junagadh  | Whole Junagadh taluka of the Junagadh District      |
| 275    | Agriculture officer, Bhesan  | Whole Bhesan taluka of the Junagadh District        |
| 276    | Agriculture officer, Visavadar   | Whole Visavadar taluka of the Junagadh District     |
| 277    | Agriculture officer, Mendarda  | Whole Mendarda taluka of the Junagadh District      |
| 278    | Agriculture officer, Maliya-Hatina   | Whole Maliya-Hatina taluka of the Junagadh District |
| 279    | Agriculture officer, Keshod  | Whole Keshod taluka of the Junagadh District        |
| 280    | Agriculture officer, Mangrol   | Whole Mangrol taluka of the Junagadh District       |
| 281    | Agriculture officer, Vanthali  | Whole Vanthali taluka of the Junagadh District      |
| 282    | Agriculture officer, Manavadar,  | Whole Manavadar taluka of the Junagadh District     |
| 283    | Deputy Director of Agriculture (Extension), Porbandar  | Whole of the Porbandar District                     |
| 284    | Assistant Director of Agriculture (Quality Control), Porbandar   | Whole of the Porbandar District                     |
| 285    | Agriculture officer, Porbandar   | Whole Porbandar taluka of the Porbandar District    |
| 286    | Agriculture officer, Ranavav   | Whole Ranavav taluka of the Porbandar District      |
| 287    | Agriculture officer, Kutiyana  | Whole Kutiyana taluka of the Porbandar District     |
| 288    | Deputy Director of Agriculture (Extension), Amreli   | Whole of the Amreli District                        |
| 289    | Assistant Director of Agriculture (Quality Control), Amreli  | Whole of the Amreli District                        |
| 290    | Agriculture officer, Amreli  | Whole Amreli taluka of the Amreli District          |
| 291    | Agriculture officer, Liliya  | Whole Liliya taluka of the Amreli District          |

| <b>Sr.No.</b> | <b>Designation of Officers</b>  | <b>Local Area of Jurisdiction</b>                  |
|---------------|---|--|
| <b>1</b>      | <b>2</b>  | <b>3</b>   |
| 292           | Agriculture officer, Lathi  | Whole Lathi taluka of the Amreli District          |
| 293           | Agriculture officer, Dhari  | Whole Dhari taluka of the Amreli District          |
| 294           | Agriculture officer, Babra  | Whole Babra taluka of the Amreli District          |
| 295           | Agriculture officer, Vadia  | Whole Vadia taluka of the Amreli District          |
| 296           | Agriculture officer, Bagasara   | Whole Bagasara taluka of the Amreli District       |
| 297           | Agriculture officer, Rajula   | Whole Rajula taluka of the Amreli District         |
| 298           | Agriculture officer, Savarkundla  | Whole Savarkundla taluka of the Amreli District    |
| 299           | Agriculture officer, Jafarabad  | Whole Jafarabad taluka of the Amreli District      |
| 300           | Agriculture officer, Khambha  | Whole Khambha taluka of the Amreli District        |
| 301           | Deputy Director of Agriculture (Extension), Bhavnagar   | Whole of the Bhavnagar District                    |
| 302           | Assistant Director of Agriculture (Quality Control), Bhavnagar  | Whole of the Bhavnagar District                    |
| 303           | Agriculture officer, Bhavnagar  | Whole Bhavnagar taluka of the Bhavnagar District   |
| 304           | Agriculture officer, Ghogha   | Whole Ghogha taluka of the Bhavnagar District      |
| 305           | Agriculture officer, Vallbhipur   | Whole Vallbhipur taluka of the Bhavnagar District  |
| 306           | Agriculture officer, Umralla  | Whole Umralla taluka of the Bhavnagar District     |
| 307           | Agriculture officer, Palitana   | Whole Palitana taluka of the Bhavnagar District    |
| 308           | Agriculture officer, Gariyadhar   | Whole Gariyadhar taluka of the Bhavnagar District  |
| 309           | Agriculture officer, Shihor   | Whole Shihor taluka of the Bhavnagar District      |
| 310           | Agriculture officer, Talaja   | Whole Talaja taluka of the Bhavnagar District      |
| 311           | Agriculture officer, Mahuva   | Whole Mahuva taluka of the Bhavnagar District      |
| 312           | Agriculture officer, Jesar  | Whole Jesar taluka of the Bhavnagar District       |
| 313           | Deputy Director of Agriculture (Extension), Veraval, District: Gir Somnath  | Whole of the Gir Somnath District                  |
| 314           | Assistant Director of Agriculture, Veraval C/o Office of the Deputy Director of Agriculture (Extension), Veraval, District: Gir Somnath | Whole of the Gir Somnath District                  |
| 315           | Agriculture officer, Veraval  | Whole Veraval taluka of the Gir Somnath District   |
| 316           | Agriculture officer, Una  | Whole Una taluka of the Gir Somnath District       |
| 317           | Agriculture officer, Talala   | Whole Talala taluka of the Gir Somnath District    |
| 318           | Agriculture officer, Sutrapada  | Whole Sutrapada taluka of the Gir Somnath District |
| 319           | Agriculture officer, Kodinar  | Whole Kodinar taluka of the Gir Somnath District   |
| 320           | Agriculture officer, Girgadhda  | Whole Girgadhda taluka of the Gir Somnath District |
| 321           | Deputy Director of Agriculture (Extension), Botad   | Whole of the Botad District                        |
| 322           | Assistant Director of Agriculture, Botad  | Whole of the Botad District                        |

| Sr.No. | Designation of Officers   | Local Area of Jurisdiction                 |
|--------|---|--|
| 1      | 2   | 3  |
|        | C/o Office of the Deputy Director of Agriculture ( Extension ), Botad |  |
| 323    | Agriculture officer, Gadhada  | Whole Gadhada taluka of the Botad District |
| 324    | Agriculture officer, Botad  | Whole Botad taluka of the Botad District   |
| 325    | Agriculture officer, Barvala  | Whole Barvala taluka of the Botad District |
| 326    | Agriculture officer, Ranpur   | Whole Ranpur taluka of the Botad District  |

By order and in the name of the Governor of Gujarat,

**BHAVITA RATHOD,**  
Under Secretary to Government.

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सत्यमेव जयते

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## EXTRAORDINARY

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Separate paging is given to this Part in order that it may be filed as a Separate Compilation.

### PART IV-A

Rules and Orders (Other than those published in Parts I, I-A, and I-L) made  
by the Government of Gujarat under the Central Acts

### AGRICULTURE, FARMERS WELFARE AND CO-OPERATION DEPARTMENT

#### NOTIFICATION

Sachivalaya, Gandhinagar, 12<sup>th</sup> January, 2018.

#### FERTILIZER (CONTROL) ORDER, 1985

**NO.GHKH/17/2018/FER/10/2016/83/K-5:-** In exercise of the powers conferred by Clause 27 of the Fertilizer (Control) Order, 1985 and in supersession of all the previous notification issued in this behalf, the Government of Gujarat hereby appoints the officers specified in column 2 of the schedule appended hereto to be the Inspectors of Fertilizers for the purpose of the aforesaid Order, and defines the local areas specified against each of them in column 3 of the said schedule within which each of such Inspectors shall exercise his jurisdiction.

#### SCHEDULE

| Sr. No. | Designation of Officer   | Local Areas of Jurisdiction  |
|---------|--|--|
| 1       | 2  | 3  |
| 1       | Deputy Director of Agriculture (Quality Control), Office of the Directorate of Agriculture, Gujarat State, Gandhinagar | Whole of the State of Gujarat  |
| 2       | Assistant Director of Agriculture (Vigilance ), Office of the Directorate of Agriculture, Gujarat State, Gandhinagar   | Whole of the State of Gujarat  |
| 3       | Assistant Director of Agriculture ( Law ), Office of the Directorate of Agriculture, Gujarat State, Gandhinagar        | Whole of the State of Gujarat  |
| 4       | Agriculture Officer ( Quality Control-1 ), Office of the Directorate of Agriculture, Gujarat State, Gandhinagar        | Whole of the State of Gujarat  |
| 5       | Agriculture Officer ( Quality Control-2 ), Office of the Directorate of Agriculture, Gujarat State, Gandhinagar        | Whole of the State of Gujarat  |
| 6       | Agriculture Officer ( Quality Control-3 ), Office of the Directorate of Agriculture, Gujarat State, Gandhinagar        | Whole of the State of Gujarat  |
| 7       | Joint Director of Agriculture ( Seed ), Office of the Directorate of Agriculture, Gujarat State, Gandhinagar           | Whole of the State of Gujarat  |
| 8       | Deputy Director of Agriculture ( Fertilizer), Office of the Directorate of Agriculture, Gujarat State, Gandhinagar     | Whole of the State of Gujarat  |
| 9       | Joint Director of Agriculture ( Extention ), Mehsana   | Whole of the Mehsana, Banaskantha, Patan, Sabarkantha and Arvalli District |

| <b>Sr. No.</b> | <b>Designation of Officer</b>   | <b>Local Areas of Jurisdiction</b>  |
|----------------|---|---|
| <b>1</b>       | <b>2</b>  | <b>3</b>  |
| 10             | Joint Director of Agriculture ( Extention ), Ahmedabad                                | Whole of the Ahmedabad, Gandhinagar, Kheda and Anand District                                 |
| 11             | Joint Director of Agriculture ( Extention ), Vadodra                                  | Whole of the Vadodra. Chhotaudepur, Bharuch, Panchmahal, Dahod, Narmda and Mahisagar District |
| 12             | Joint Director of Agriculture ( Extension ), Surat                                    | Whole of the Surat, Valsad, Navsari, Dang and Tapi District                                   |
| 13             | Joint Director of Agriculture ( Extension ), Rajkot                                   | Whole of the Rajkot, Jamnagar, Kutch, Surendranagar, Morbi and Devbhumi dwarka District       |
| 14             | Joint Director of Agriculture ( Extention ), Junagadh                                 | Whole of the Junagadh, Amreli, Bhavnagar, Porbandar, Botad and Gir Somnath District           |
| 15             | Deputy Director of Agriculture ( Extension ), Palanpur, District: Banaskantha         | Whole of the Banaskantha District   |
| 16             | Assistant Director of Agriculture ( Quality Control), Palanpur, District: Banaskantha | Whole of the Banaskantha District   |
| 17             | Agriculture officer, Palanpur   | Whole Palanpur taluka of the Banaskantha District   |
| 18             | Agriculture officer, Vadgam   | Whole Vadgam taluka of the Banaskantha District   |
| 19             | Agriculture officer, Danta  | Whole Danta taluka of the Banaskantha District  |
| 20             | Agriculture officer, Dantiwada  | Whole Dantiwada taluka of the Banaskantha District  |
| 21             | Agriculture officer, Amirghadh  | Whole Amirghadh taluka of the Banaskantha District  |
| 22             | Agriculture officer, Deesa  | Whole Deesa taluka of the Banaskantha District  |
| 23             | Agriculture officer, Dhanera  | Whole Dhanera taluka of the Banaskantha District  |
| 24             | Agriculture officer, Kankarej   | Whole Kankarej taluka of the Banaskantha District   |
| 25             | Agriculture officer, Deodar   | Whole Deodar taluka of the Banaskantha District   |
| 26             | Agriculture officer, Vav  | Whole Vav taluka of the Banaskantha District  |
| 27             | Agriculture officer, Tharad   | Whole Tharad taluka of the Banaskantha District   |
| 28             | Agriculture officer, Bhabhar  | Whole Bhabhar taluka of the Banaskantha District  |
| 29             | Agriculture officer Suigam  | Whole Suigam taluka of the Banaskantha District   |
| 30             | Agriculture officer, Lakhni   | Whole Lakhni taluka of the Banaskantha District   |
| 31             | Deputy Director of Agriculture ( Extension ), Mehsana                                 | Whole of the Mehsana District   |
| 32             | Assistant Director of Agriculture ( Quality Control), Mehsana                         | Whole of the Mehsana District   |
| 33             | Agriculture officer, Mehsana  | Whole Mehsana taluka of the Mehsana District  |
| 34             | Agriculture officer, Kadi   | Whole Kadi taluka of the Mehsana District   |
| 35             | Agriculture officer, Becharaji  | Whole Becharaji taluka of the Mehsana District  |

| <b>Sr. No.</b> | <b>Designation of Officer</b>  | <b>Local Areas of Jurisdiction</b>               |
|----------------|--|--|
| <b>1</b>       | <b>2</b>   | <b>3</b>   |
| 36             | Agriculture officer, Visnagar  | Whole Visnagar taluka of the Mehsana District    |
| 37             | Agriculture officer, Kheralu   | Whole Kheralu taluka of the Mehsana District     |
| 38             | Agriculture officer, Unjha   | Whole Unjha taluka of the Mehsana District       |
| 39             | Agriculture officer, Satlasana   | Whole Satlasana taluka of the Mehsana District   |
| 40             | Agriculture officer, Vijapur   | Whole Vijapur taluka of the Mehsana District     |
| 41             | Agriculture officer, Vadnagar  | Whole Vadnagar taluka of the Mehsana District    |
| 42             | Agriculture officer, Jotana  | Whole Jotana taluka of the Mehsana District      |
| 43             | Deputy Director of Agriculture ( Extension ), Patan                                      | Whole of the Patan District                      |
| 44             | Assistant Director of Agriculture ( Quality Control), Patan                              | Whole of the Patan District                      |
| 45             | Agriculture officer, Patan   | Whole Patan taluka of Patan District             |
| 46             | Agriculture officer, Siddhpur  | Whole Siddhpur taluka of Patan District          |
| 47             | Agriculture officer, Chanasma  | Whole Chanasma taluka of Patan District          |
| 48             | Agriculture officer, Sami  | Whole Sami taluka of Patan District              |
| 49             | Agriculture officer, Santalpur   | Whole Santalpur taluka of Patan District         |
| 50             | Agriculture officer, Radhanpur   | Whole Radhanpur taluka of Patan District         |
| 51             | Agriculture officer, Harij   | Whole Harij taluka of Patan District             |
| 52             | Agriculture officer, Saraswati   | Whole Saraswati taluka of Patan District         |
| 53             | Agriculture Officer, Shankheshwar  | Whole Shankheshwar taluka of Patan District      |
| 54             | Deputy Director of Agriculture ( Extension ), Himmatnagar, District: Sabarkantha         | Whole of the Sabarkantha District                |
| 55             | Assistant Director of Agriculture ( Quality Control), Himmatnagar, District: Sabarkantha | Whole of the Sabarkantha District                |
| 56             | Agriculture officer, Himmatnagar   | Whole Himmatnagar taluka of Sabarkantha District |
| 57             | Agriculture officer, Idar  | Whole Idar taluka of Sabarkantha District        |
| 58             | Agriculture officer, Vadali  | Whole Vadali taluka of Sabarkantha District      |
| 59             | Agriculture officer, Khedbrahma  | Whole Khedbrahma taluka of Sabarkantha District  |
| 60             | Agriculture officer, Poshina   | Whole Poshina taluka of Sabarkantha District     |
| 61             | Agriculture officer, Vijaynagar  | Whole Vijaynagar taluka of Sabarkantha District  |
| 62             | Agriculture officer, Talod   | Whole Talod taluka of Sabarkantha District       |
| 63             | Agriculture officer, Prantij   | Whole Prantij taluka of Sabarkantha District     |
| 64             | Deputy Director of Agriculture ( Extension ), Modasa, District: Arvali                   | Whole of the Arvali District                     |

| <b>Sr. No.</b> | <b>Designation of Officer</b>  | <b>Local Areas of Jurisdiction</b>                    |
|----------------|--|---|
| <b>1</b>       | <b>2</b>   | <b>3</b>  |
| 65             | Assistant Director of Agriculture. Modasa C/o Office of the Deputy Director of Agriculture ( Extension ), Modasa, District: Arvali | Whole of the Arvali District                          |
| 66             | Agriculture officer, Bhiloda   | Whole Bhiloda taluka of the Arvali District           |
| 67             | Agriculture officer, Meghraj   | Whole Meghraj taluka of the Arvali District           |
| 68             | Agriculture officer, Modasa  | Whole Modasa taluka of the Arvali District            |
| 69             | Agriculture officer, Dhansura  | Whole Dhansura taluka of the Arvali District          |
| 70             | Agriculture officer, Malpur  | Whole Malpur taluka of the Arvali District            |
| 71             | Agriculture officer, Bayad   | Whole Bayad taluka of the Arvali District             |
| 72             | Deputy Director of Agriculture ( Extension ), Ahmedabad  | Whole of the Ahmedabad District                       |
| 73             | Assistant Director of Agriculture ( Quality Control), Ahmedabad  | Whole of the Ahmedabad District                       |
| 74             | Agriculture officer, Ahmedabad City  | Whole Ahmedabad City taluka of the Ahmedabad District |
| 75             | Agriculture officer. Daskroi   | Whole Daskroi taluka of the Ahmedabad District        |
| 76             | Agriculture officer, Dholka  | Whole Dholka taluka of the Ahmedabad District         |
| 77             | Agriculture officer, Dhandhuka   | Whole Dhandhuka taluka of the Ahmedabad District      |
| 78             | Agriculture Officer, Bavla   | Whole Bavla taluka of the Ahmedabad District          |
| 79             | Agriculture officer. Viramgam  | Whole Viramgam taluka of the Ahmedabad District       |
| 80             | Agriculture officer, Mandal  | Whole Mandal taluka of the Ahmedabad District         |
| 81             | Agriculture officer, Detroj-Rampura  | Whole Detroj-Rampura taluka of the Ahmedabad District |
| 82             | Agriculture officer, Sanand  | Whole Sanand taluka of the Ahmedabad District         |
| 83             | Agriculture officer, Dholera   | Whole Dholera taluka of the Ahmedabad District        |
| 84             | Deputy Director of Agriculture ( Extension ), Gandhinagar  | Whole of the Gandhinagar District                     |
| 85             | Assistant Director of Agriculture ( Quality Control), Gandhinagar  | Whole of the Gandhinagar District                     |
| 86             | Agriculture officer, Gandhinagar   | Whole Gandhinagar taluka of the Gandhinagar District  |
| 87             | Agriculture officer, Dahegam   | Whole Dahegam taluka of the Gandhinagar District      |
| 88             | Agriculture officer, Kalol   | Whole Kalol taluka of the Gandhinagar District        |
| 89             | Agriculture officer, Mansa   | Whole Mansa taluka of the Gandhinagar District        |
| 90             | Deputy Director of Agriculture ( Extension ), Nadiyad, District: Kheda   | Whole of the Kheda District                           |
| 91             | Assistant Director of Agriculture ( Quality Control), Nadiyad, District: Kheda   | Whole of the Kheda District                           |

| <b>Sr. No.</b> | <b>Designation of Officer</b>   | <b>Local Areas of Jurisdiction</b>                |
|----------------|---|---|
| <b>1</b>       | <b>2</b>  | <b>3</b>  |
| 92             | Agriculture officer, Nadiyad  | Whole Nadiyad taluka of the Kheda District        |
| 93             | Agriculture officer, Mahudha  | Whole Mahudha taluka of the Kheda District        |
| 94             | Agriculture officer, Matar  | Whole Matar taluka of the Kheda District          |
| 95             | Agriculture officer, Mahemdavad   | Whole Mahemdavad taluka of the Kheda District     |
| 96             | Agriculture officer, Kheda  | Whole Kheda taluka of the Kheda District          |
| 97             | Agriculture officer, Kapadvanj  | Whole Kapadvanj taluka of the Kheda District      |
| 98             | Agriculture officer, Kathlal  | Whole Kathlal taluka of the Kheda District        |
| 99             | Agriculture officer, Thasra   | Whole Thasra taluka of the Kheda District         |
| 100            | Agriculture officer, Galteshwar   | Whole Galteshwar taluka of the Kheda District     |
| 101            | Agriculture officer, Vaso   | Whole Vaso taluka of the Kheda District           |
| 102            | Deputy Director of Agriculture ( Extension ), Anand   | Whole of the Anand District                       |
| 103            | Assistant Director of Agriculture ( Quality Control), Anand   | Whole of the Anand District                       |
| 104            | Agriculture officer, Anand  | Whole Anand taluka of the Anand District          |
| 105            | Agriculture officer, Umreth   | Whole Umreth taluka of the Anand District         |
| 106            | Agriculture officer, Borsad   | Whole Borsad taluka of the Anand District         |
| 107            | Agriculture officer, Ankлав   | Whole Ankлав taluka of the Anand District         |
| 108            | Agriculture officer, Petlad   | Whole Petlad taluka of the Anand District         |
| 109            | Agriculture officer, Sojitra  | Whole Sojitra taluka of the Anand District        |
| 110            | Agriculture officer, Khambhat   | Whole Khambhat taluka of the Anand District       |
| 111            | Agriculture officer, Tarapur  | Whole Tarapur taluka of the Anand District        |
| 112            | Deputy Director of Agriculture ( Extension ) , Lunavada, District: Mahisagar  | Whole of the Mahisagar District                   |
| 113            | Assistant Director of Agriculture, Lunavada C/o Office of the Deputy Director of Agriculture ( Extension ), Lunavada, District: Mahisagar | Whole of the Mahisagar District                   |
| 114            | Agriculture officer, Lunavada   | Whole Lunavada taluka of the Mahisagar District   |
| 115            | Agriculture officer, Santrampur   | Whole Santrampur taluka of the Mahisagar District |
| 116            | Agriculture officer, Kadana   | Whole Kadana taluka of the Mahisagar District     |
| 117            | Agriculture officer, Khanpur  | Whole Khanpur taluka of the Mahisagar District    |
| 118            | Agriculture officer, Balasinor  | Whole Balasinor taluka of the Mahisagar District  |
| 119            | Agriculture officer, Virpur   | Whole Virpur taluka of the Mahisagar District     |
| 120            | Deputy Director of Agriculture ( Extension ), Godhra, District: Panchmahal  | Whole of the Panchmahal District                  |

| Sr. No. | Designation of Officer  | Local Areas of Jurisdiction                        |
|---------|---|--|
| 1       | 2   | 3  |
| 121     | Assistant Director of Agriculture ( Quality Control), Godhra, District: Panchmahal  | Whole of the Panchmahal District                   |
| 122     | Agriculture officer, Godhra   | Whole Godhra taluka of the Panchmahal District     |
| 123     | Agriculture officer, MorvaHadaf   | Whole MorvaHadaf taluka of the Panchmahal District |
| 124     | Agriculture officer, Shahera  | Whole Shahera taluka of the Panchmahal District    |
| 125     | Agriculture officer Halol   | Whole Halol taluka of the Panchmahal District      |
| 126     | Agriculture officer, Kalol  | Whole Kalol taluka of the Panchmahal District      |
| 127     | Agriculture officer, Jambughoda   | Whole Jambughoda taluka of the Panchmahal District |
| 128     | Agriculture officer, Ghoghamba  | Whole Ghoghamba taluka of the Panchmahal District  |
| 129     | Deputy Director of Agriculture ( Extension ), Dahod   | Whole of the Dahod District                        |
| 130     | Assistant Director of Agriculture ( Quality Control), Dahod   | Whole of the Dahod District                        |
| 131     | Agriculture officer, Dahod  | Whole Dahod taluka of the Dahod District           |
| 132     | Agriculture officer, Zalod  | Whole Zalod taluka of the Dahod District           |
| 133     | Agriculture officer, Fatepura   | Whole Fatepura taluka of the Dahod District        |
| 134     | Agriculture officer, Garbada  | Whole Garbada taluka of the Dahod District         |
| 135     | Agriculture officer, Limkheda   | Whole Limkheda taluka of the Dahod District        |
| 136     | Agriculture officer, Dhanpur  | Whole Dhanpur taluka of the Dahod District         |
| 137     | Agriculture officer, Devgad-Baria   | Whole Devgad-Baria taluka of the Dahod District    |
| 138     | Agriculture officer, Sanjeli  | Whole Sanjeli taluka of the Dahod District         |
| 139     | Deputy Director of Agriculture ( Extension ), Vadodara  | Whole of the Vadodara District                     |
| 140     | Assistant Director of Agriculture ( Quality Control), Vadodara  | Whole of the Vadodara District                     |
| 141     | Agriculture officer, Vadodara   | Whole Vadodara taluka of the Vadodara District     |
| 142     | Agriculture officer, Vaghodia   | Whole Vaghodia taluka of the Vadodara District     |
| 143     | Agriculture officer, Savli  | Whole Savli taluka of the Vadodara District        |
| 144     | Agriculture officer, Dabhoi   | Whole Dabhoi taluka of the Vadodara District       |
| 145     | Agriculture officer, Shinor   | Whole Shinor taluka of the Vadodara District       |
| 146     | Agriculture officer, Padra  | Whole Padra taluka of the Vadodara District        |
| 147     | Agriculture officer, Karjan   | Whole Karjan taluka of the Vadodara District       |
| 148     | Agriculture officer, Desar  | Whole Desar of the Vadodara District               |
| 149     | Deputy Director of Agriculture ( Extension ), Chhotaudepur  | Whole of the Chhotaudepur District                 |
| 150     | Assistant Director of Agriculture, Chhotaudepur<br>C/o Office of the Deputy Director of Agriculture (Extension), Chhotaudepur | Whole of the Chhotaudepur District                 |

| <b>Sr. No.</b> | <b>Designation of Officer</b>   | <b>Local Areas of Jurisdiction</b>                      |
|----------------|---|---|
| <b>1</b>       | <b>2</b>  | <b>3</b>  |
| 151            | Agriculture officer, Jetpur - Pavi  | Whole Jetpur - Pavi taluka of the Chhotaudepur District |
| 152            | Agriculture officer, Chhotaudepur   | Whole Chhotaudepur taluka of the Chhotaudepur District  |
| 153            | Agriculture officer, Kavant   | Whole Kavant taluka of the Chhotaudepur District        |
| 154            | Agriculture officer, Sankheda   | Whole Sankheda taluka of the Chhotaudepur District      |
| 155            | Agriculture officer, Nasvadi  | Whole Nasvadi taluka of the Chhotaudepur District       |
| 156            | Agriculture officer, Bodeli   | Whole Bodeli taluka of the Chhotaudepur District        |
| 157            | Deputy Director of Agriculture ( Extension), Bharuch                              | Whole of the Bharuch District                           |
| 158            | Assistant Director of Agriculture ( Quality Control), Bharuch                     | Whole of the Bharuch District                           |
| 159            | Agriculture officer, Bharuch  | Whole Bharuch taluka of the Bharuch District            |
| 160            | Agriculture officer, Ankleshwar   | Whole Ankleshwar taluka of the Bharuch District         |
| 161            | Agriculture officer, Hansot   | Whole Hansot taluka of the Bharuch District             |
| 162            | Agriculture officer, Zagadia  | Whole Zagadia taluka of the Bharuch District            |
| 163            | Agriculture officer, Valia  | Whole Valia taluka of the Bharuch District              |
| 164            | Agriculture officer, Amod   | Whole Amod taluka of the Bharuch District               |
| 165            | Agriculture officer, Jambusar   | Whole Jambusar taluka of the Bharuch District           |
| 166            | Agriculture officer, Vaghara  | Whole Vaghara taluka of the Bharuch District            |
| 167            | Agriculture officer, Netrang  | Whole Netrang taluka of the Bharuch District            |
| 168            | Deputy Director of Agriculture ( Extension ),Rajpipla, District: Narmada          | Whole of the Narmada District                           |
| 169            | Assistant Director of Agriculture ( Quality Control), Rajpipla, District: Narmada | Whole of the Narmada District                           |
| 170            | Agriculture officer, Nandod   | Whole Nandod taluka of the Narmda District              |
| 171            | Agriculture officer, Tilakwada  | Whole Tilakwada taluka of the Narmda District           |
| 172            | Agriculture officer, Dediapada  | Whole Dediapada taluka of the Narmda District           |
| 173            | Agriculture officer, Sagbara  | Whole Sagbara taluka of the Narmda District             |
| 174            | Deputy Director of Agriculture (Extension),Surat                                  | Whole of the Surat & Tapi District                      |
| 175            | Assistant Director of Agriculture ( Quality Control), Surat                       | Whole of the Surat & Tapi District                      |
| 176            | Agriculture officer, Surat City   | Whole Surat City taluka of the Surat District           |
| 177            | Agriculture officer, Kamrej   | Whole Kamrej taluka of the Surat District               |
| 178            | Agriculture officer, Palsana  | Whole Palsana taluka of the Surat District              |
| 179            | Agriculture officer, Bardoli  | Whole Bardoli taluka of the Surat District              |
| 180            | Agriculture officer, Mahuva   | Whole Mahuva taluka of the Surat District               |

| <b>Sr. No.</b> | <b>Designation of Officer</b>                                 | <b>Local Areas of Jurisdiction</b>            |
|----------------|---|---|
| <b>1</b>       | <b>2</b>  | <b>3</b>                                      |
| 181            | Agriculture officer, Mandvi                                   | Whole Mandvi taluka of the Surat District     |
| 182            | Agriculture officer, Olpad                                    | Whole Olpad taluka of the Surat District      |
| 183            | Agriculture officer, Mangrol                                  | Whole Mangrol taluka of the Surat District    |
| 184            | Agriculture officer, Umarapada                                | Whole Umarapada taluka of the Surat District  |
| 185            | Agriculture officer, Choryasi                                 | Whole Choryasi taluka of the Surat District   |
| 186            | Agriculture officer. Vyara                                    | Whole Vyara taluka of the Tapi District       |
| 187            | Agriculture officer, Songadh                                  | Whole Songadh taluka of the Tapi District     |
| 188            | Agriculture officer, Uchchhal                                 | Whole Uchchhal taluka of the Tapi District    |
| 189            | Agriculture officer, Nizar                                    | Whole Nizar taluka of the Tapi District       |
| 190            | Agriculture officer, Valod                                    | Whole Valod taluka of the Tapi District       |
| 191            | Agriculture officer, Kukarmunda                               | Whole Kukarmunda taluka of the Tapi District  |
| 192            | Agriculture officer, Dolvan                                   | Whole Dolvan taluka of the Tapi District      |
| 193            | Deputy Director of Agriculture ( Extension ), Valsad          | Whole of the Valsad District                  |
| 194            | Assistant Director of Agriculture ( Quality Control), Valsad  | Whole of the Valsad District                  |
| 195            | Agriculture officer, Valsad                                   | Whole Valsad taluka of the Valsad District    |
| 196            | Agriculture officer, Dharampur                                | Whole Dharampur taluka of the Valsad District |
| 197            | Agriculture officer, Kaparada                                 | Whole Kaparada taluka of the Valsad District  |
| 198            | Agriculture officer, Pardi                                    | Whole Pardi taluka of the Valsad District     |
| 199            | Agriculture officer. Umargam                                  | Whole Umargam taluka of the Valsad District   |
| 200            | Agriculture officer. Vapi                                     | Whole Vapi taluka of the Valsad District      |
| 201            | Deputy Director of Agriculture ( Extension ), Navsari         | Whole of the Navsari & Dang District          |
| 202            | Assistant Director of Agriculture ( Quality Control), Navsari | Whole of the Navsari & Dang District          |
| 203            | Agriculture officer, Navsari                                  | Whole Navsari taluka of the Navsari district  |
| 204            | Agriculture officer. Chikhali                                 | Whole Chikhali of the Navsari district        |
| 205            | Agriculture officer, Gandevi                                  | Whole Gandevi of the Navsari district         |
| 206            | Agriculture officer. Vansda                                   | Whole Vansda of the Navsari district          |
| 207            | Agriculture officer, Jalalpur                                 | Whole Jalalpur of the Navsari district        |
| 208            | Agriculture officer, khergam                                  | Whole khergam of the Navsari district         |
| 209            | Agriculture officer, Ahwa                                     | Whole Ahwa taluka of the Dang District        |
| 210            | Agriculture officer, Subir                                    | Whole Subir taluka of the Dang District       |



| <b>Sr. No.</b> | <b>Designation of Officer</b>                                       | <b>Local Areas of Jurisdiction</b>                     |
|----------------|---|--|
| <b>1</b>       | <b>2</b>  | <b>3</b>   |
| 211            | Agriculture officer, Vaghai   | Whole Vaghai taluka of the Dang District               |
| 212            | Deputy Director of Agriculture ( Extension ), Surendranagar         | Whole of the Surendranagar District                    |
| 213            | Assistant Director of Agriculture ( Quality Control), Surendranagar | Whole of the Surendranagar District                    |
| 214            | Agriculture officer. Vadhvan  | Whole Vadhvan taluka of the Surendranagar District     |
| 215            | Agriculture officer, Lakhtar  | Whole Lakhtar taluka of the Surendranagar District     |
| 216            | Agriculture officer, Limdi  | Whole Limdi taluka of the Surendranagar District       |
| 217            | Agriculture officer, Chotila  | Whole Chotila taluka of the Surendranagar District     |
| 218            | Agriculture officer, Sayla  | Whole Sayla taluka of the Surendranagar District       |
| 219            | Agriculture officer, Dhrangadhra                                    | Whole Dhrangadhra taluka of the Surendranagar District |
| 220            | Agriculture officer, Thangadh                                       | Whole Thangadh taluka of the Surendranagar District    |
| 221            | Agriculture officer, Dasada (Patadi)                                | Whole Dasada taluka of the Surendranagar District      |
| 222            | Agriculture officer, Muli   | Whole Muli taluka of the Surendranagar District        |
| 223            | Agriculture officer. Chuda  | Whole Chuda taluka of the Surendranagar District       |
| 224            | Deputy Director of Agriculture ( Extension ), Rajkot                | Whole of the Rajkot District                           |
| 225            | Assistant Director of Agriculture ( Quality Control), Rajkot        | Whole of the Rajkot District                           |
| 226            | Agriculture officer, Rajkot   | Whole Rajkot taluka of the Rajkot District             |
| 227            | Agriculture officer, Vinchhiya                                      | Whole Vinchhiya taluka of the Rajkot District          |
| 228            | Agriculture officer, Gondal   | Whole Gondal taluka of the Rajkot District             |
| 229            | Agriculture officer, Jasdan   | Whole Jasdan taluka of the Rajkot District             |
| 230            | Agriculture officer, Paddhari                                       | Whole Paddhari taluka of the Rajkot District           |
| 231            | Agriculture officer, Lodhika  | Whole Lodhika taluka of the Rajkot District            |
| 232            | Agriculture officer, Kotda-sangani                                  | Whole Kotda-sangani taluka of the Rajkot District      |
| 233            | Agriculture officer, Dhoraji  | Whole Dhoraji taluka of the Rajkot District            |
| 234            | Agriculture officer, Upleta   | Whole Upleta taluka of the Rajkot District             |
| 235            | Agriculture officer, Jetpur   | Whole Jetpur taluka of the Rajkot District             |
| 236            | Agriculture officer, JamKandorana                                   | Whole JamKandorana taluka of the Rajkot District       |
| 237            | Deputy Director of Agriculture ( Extension ), Jamnagar              | Whole of the Jamnagar District                         |
| 238            | Assistant Director of Agriculture ( Quality Control), Jamnagar      | Whole of the Jamnagar District                         |
| 239            | Agriculture officer, Jamnagar                                       | Whole Jamnagar taluka of the Jamnagar District         |
| 240            | Agriculture officer, Lalpur   | Whole Lalpur taluka of the Jamnagar District           |

| <b>Sr. No.</b> | <b>Designation of Officer</b>   | <b>Local Areas of Jurisdiction</b>                                   |
|----------------|---|--|
| <b>1</b>       | <b>2</b>  | <b>3</b>   |
| 241            | Agriculture officer, Kalavad  | Whole Kalavad taluka of the Jamnagar District                        |
| 242            | Agriculture officer, Dhrol  | Whole Dhrol taluka of the Jamnagar District                          |
| 243            | Agriculture officer, Jodiya   | Whole Jodiya taluka of the Jamnagar District                         |
| 244            | Agriculture officer, Jamjodhpur   | Whole Jamjodhpur taluka of the Jamnagar District                     |
| 245            | Deputy Director of Agriculture ( Extension ), Khambhaliya, District: Devbhumi dwarka  | Whole of the Devbhumi dwarka District                                |
| 246            | Assistant Director of Agriculture. Khambhaliya C/o Deputy Director of Agriculture ( Extension ). Khambhaliya, District: Devbhumi dwarka | Whole of the Devbhumi dwarka District                                |
| 247            | Agriculture officer. Bhanvad  | Whole Bhanvad taluka of the the Devbhumi dwarka District             |
| 248            | Agriculture officer. Kalyanpur  | Whole Kalyanpur taluka of the the Devbhumi dwarka District           |
| 249            | Agriculture officer, Khambhaliya  | Whole Khambhaliya taluka of the the Devbhumi dwarka District         |
| 250            | Agriculture officer, Okhamandal (Dwarka)  | Whole Okhamandal (Dwarka) taluka of the the Devbhumi dwarka District |
| 251            | Deputy Director of Agriculture ( Extension ), Bhuj, District: Kutch   | Whole Kutch District   |
| 252            | Assistant Director of Agriculture ( Quality Control), Bhuj, District: Kutch   | Whole Kutch District   |
| 253            | Agriculture officer, Bhuj   | Whole Bhuj taluka of the Kutch District                              |
| 254            | Agriculture officer, Mandvi   | Whole Mandvi taluka of the Kutch District                            |
| 255            | Agriculture officer, Nakhatrana   | Whole Nakhatrana taluka of the Kutch District                        |
| 256            | Agriculture officer, Abdasa   | Whole Abdasa taluka of the Kutch District                            |
| 257            | Agriculture officer, Lakhpatt   | Whole Lakhpatt taluka of the Kutch District                          |
| 258            | Agriculture officer, Gandhidham   | Whole Gandhidham taluka of the Kutch District                        |
| 259            | Agriculture officer, Bhachau  | Whole Bhachau taluka of the Kutch District                           |
| 260            | Agriculture officer, Rapar  | Whole Rapar taluka of the Kutch District                             |
| 261            | Agriculture officer, Mundra   | Whole Mundra taluka of the Kutch District                            |
| 262            | Agriculture officer, Anjar  | Whole Anjar taluka of the Kutch District                             |
| 263            | Deputy Director of Agriculture ( Extension ), Morbi   | Whole Morbi District   |
| 264            | Assistant Director of Agriculture, Morbi C/o Office of the Deputy Director of Agriculture (Extension), Morbi                            | Whole Morbi District   |
| 265            | Agriculture officer, Halvad   | Whole Halvad taluka of the Morbi District                            |
| 266            | Agriculture officer, Morbi  | Whole Morbi taluka of the Morbi District                             |
| 267            | Agriculture officer, Vankaner   | Whole Vankaner taluka of the Morbi District                          |
| 268            | Agriculturer officer, Maliya (Miyana)   | Whole Maliya (Miyana) taluka of the Morbi District                   |

| <b>Sr. No.</b> | <b>Designation of Officer</b>                                   | <b>Local Areas of Jurisdiction</b>                  |
|----------------|---|---|
| <b>1</b>       | <b>2</b>  | <b>3</b>  |
| 269            | Agriculture officer, Tankara                                    | Whole Tankara taluka of the Morbi District          |
| 270            | Deputy Director of Agriculture ( Extension ), Junagadh          | Whole of the Junagadh District                      |
| 271            | Assistant Director of Agriculture ( Quality Control), Junagadh  | Whole of the Junagadh District                      |
| 272            | Agriculture officer, Junagadh City                              | Whole Junagadh City taluka of the Junagadh District |
| 273            | Agriculture officer, Junagadh                                   | Whole Junagadh taluka of the Junagadh District      |
| 274            | Agriculture officer, Bhesan                                     | Whole Bhesan taluka of the Junagadh District        |
| 275            | Agriculture officer, Visavadar                                  | Whole Visavadar taluka of the Junagadh District     |
| 276            | Agriculture officer, Mendarda                                   | Whole Mendarda taluka of the Junagadh District      |
| 277            | Agriculture officer, Maliya-Hatina                              | Whole Maliya-Hatina taluka of the Junagadh District |
| 278            | Agriculture officer, Keshod                                     | Whole Keshod taluka of the Junagadh District        |
| 279            | Agriculture officer, Mangrol                                    | Whole Mangrol taluka of the Junagadh District       |
| 280            | Agriculture officer, Vanthali                                   | Whole Vanthali taluka of the Junagadh District      |
| 281            | Agriculture officer, Manavadar                                  | Whole Manavadar taluka of the Junagadh District     |
| 282            | Deputy Director of Agriculture ( Extension ), Porbandar         | Whole of the Porbandar District                     |
| 283            | Assistant Director of Agriculture ( Quality Control), Porbandar | Whole of the Porbandar District                     |
| 284            | Agriculture officer, Porbandar                                  | Whole Porbandar taluka of the Porbandar District    |
| 285            | Agriculture officer, Ranavav                                    | Whole Ranavav taluka of the Porbandar District      |
| 286            | Agriculture officer, Kutiyana                                   | Whole Kutiyana taluka of the Porbandar District     |
| 287            | Deputy Director of Agriculture ( Extension ), Amreli            | Whole of the Amreli District                        |
| 288            | Assistant Director of Agriculture ( Quality Control), Amreli    | Whole of the Amreli District                        |
| 289            | Agriculture officer, Amreli                                     | Whole Amreli taluka of the Amreli District          |
| 290            | Agriculture officer, Liliya                                     | Whole Liliya taluka of the Amreli District          |
| 291            | Agriculture officer, Lathi                                      | Whole Lathi taluka of the Amreli District           |
| 292            | Agriculture officer. Dhari                                      | Whole Dhari taluka of the Amreli District           |
| 293            | Agriculture officer, Babra                                      | Whole Babra taluka of the Amreli District           |
| 294            | Agriculture officer, Vadia                                      | Whole Vadia taluka of the Amreli District           |
| 295            | Agriculture officer, Bagasara                                   | Whole Bagasara taluka of the Amreli District        |
| 296            | Agriculture officer, Rajula                                     | Whole Rajula taluka of the Amreli District          |
| 297            | Agriculture officer, Savarkundla                                | Whole Savarkundla taluka of the Amreli District     |
| 298            | Agriculture officer, Jafarabad                                  | Whole Jafarabad taluka of the Amreli District       |
| 299            | Agriculture officer, Khambha                                    | Whole Khambha taluka of the Amreli District         |

| <b>Sr. No.</b> | <b>Designation of Officer</b>  | <b>Local Areas of Jurisdiction</b>                 |
|----------------|--|--|
| <b>1</b>       | <b>2</b>   | <b>3</b>   |
| 300            | Deputy Director of Agriculture ( Extension ), Bhavnagar  | Whole of the Bhavnagar District                    |
| 301            | Assistant Director of Agriculture ( Quality Control), Bhavnagar  | Whole of the Bhavnagar District                    |
| 302            | Agriculture officer, Bhavnagar   | Whole Bhavnagar taluka of the Bhavnagar District   |
| 303            | Agriculture officer, Ghogha  | Whole Ghogha of the Bhavnagar District             |
| 304            | Agriculture officer, Vallbhipur  | Whole Vallbhipur of the Bhavnagar District         |
| 305            | Agriculture officer, Umralla   | Whole Umralla of the Bhavnagar District            |
| 306            | Agriculture officer, Palitana  | Whole Palitana of the Bhavnagar District           |
| 307            | Agriculture officer, Gariyadhar  | Whole Gariyadhar of the Bhavnagar District         |
| 308            | Agriculture officer, Shihor  | Whole Shihor of the Bhavnagar District             |
| 309            | Agriculture officer, Talaja  | Whole Talaja of the Bhavnagar District             |
| 310            | Agriculture officer, Mahuva  | Whole Mahuva of the Bhavnagar District             |
| 311            | Agriculture officer, Jesar   | Whole Jesar of the Bhavnagar District              |
| 312            | Deputy Director of Agriculture ( Extension ), Veraval, District: Gir Somnath   | Whole of the Gir Somnath District                  |
| 313            | Assistant Director of Agriculture, Veraval, C/o Office of the Deputy Director of Agriculture ( Extension ), Veraval, District: Gir Somnath | Whole of the Gir Somnath District                  |
| 314            | Agriculture officer, Veraval   | Whole Veraval taluka of the Gir Somnath District   |
| 315            | Agriculture officer, Una   | Whole Una taluka of the Gir Somnath District       |
| 316            | Agriculture officer, Talala  | Whole Talala taluka of the Gir Somnath District    |
| 317            | Agriculture officer. Sutrapada   | Whole Sutrapada taluka of the Gir Somnath District |
| 318            | Agriculture officer, Kodinar   | Whole Kodinar taluka of the Gir Somnath District   |
| 319            | Agriculture officer, Girgadhda   | Whole Girgadhda taluka of the Gir Somnath District |
| 320            | Deputy Director of Agriculture ( Extension ), Botad  | Whole of the Botad District                        |
| 321            | Assistant Director of Agriculture, Botad C/o Office of the Deputy Director of Agriculture ( Extension ), Botad                             | Whole of the Botad District                        |
| 322            | Agriculture officer, Gadhada   | Whole Gadhada taluka of the Botad District         |
| 323            | Agriculture officer, Botad   | Whole Botad taluka of the Botad District           |
| 324            | Agriculture officer, Barvala   | Whole Barvala taluka of the Botad District         |
| 325            | Agriculture officer, Ranpur  | Whole Ranpur taluka of the Botad District          |

By Order and in the name of the Governor of Gujarat,

**BHAVITA RATHOD,**  
Under Secretary to Government.



सत्यमेव जयते

# The Gujarat Government Gazette

## EXTRAORDINARY

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Separate paging is given to this Part in order that it may be filed as a Separate Compilation.

### PART IV-A

Rule and Orders (Other than those published in Parts I, I-A, and I-L) made  
by the Government of Gujarat under the Central Acts

#### AGRICULTURE, FARMERS WELFARE AND CO-OPERATION DEPARTMENT

#### Notification

Sachivalaya, Gandhinagar, 16<sup>th</sup> January, 2018

#### Seed Act, 1966 and Seeds (Control) Order, 1983.

**NO.GHKH-18-2018-IST-10-2016-63-K.6:**— In exercise of the powers conferred by Sub-section (1) of section 13 of the Seeds Act, 1966 ( 54 of 1966) read with clause 12 of the Seeds (Control) Order, 1983 and in supersession of all the notifications issued in this behalf, the Government of Gujarat hereby appoints the officers specified in column 2 of the schedule appended hereto to be Seed inspectors for the purpose of the aforesaid Act and Order and defines the local areas specified against each of them in column 3 of the said Schedule within which each of such Inspectors shall exercise their jurisdictions.

#### SCHEDULE

| Sr.No. | Designation of Officers  | Local Areas of Jurisdiction   |
|--------|--|-------------------------------|
| 1      | 2  | 3                             |
| 1      | Deputy Director of Agriculture (Quality Control), Office of the Directorate of Agriculture, Gujarat State, Gandhinagar | Whole of the State of Gujarat |
| 2      | Assistant Director of Agriculture (Vigilance), Office of the Directorate of Agriculture, Gujarat State, Gandhinagar    | Whole of the State of Gujarat |
| 3      | Assistant Director of Agriculture (Law), Office of the Directorate of Agriculture, Gujarat State, Gandhinagar          | Whole of the State of Gujarat |
| 4      | Agriculture Officer (Quality Control-1), Office of the Directorate of Agriculture, Gujarat State, Gandhinagar          | Whole of the State of Gujarat |
| 5      | Agriculture Officer (Quality Control-2), Office of the Directorate of Agriculture, Gujarat State, Gandhinagar          | Whole of the State of Gujarat |

| <b>Sr.No.</b> | <b>Designation of Officers</b>   | <b>Local Areas of Jurisdiction</b>  |
|---------------|--|---|
| <b>1</b>      | <b>2</b>   | <b>3</b>  |
| 6             | Agriculture Officer ( Quality Control-3), Office of the Directorate of Agriculture, Gujarat State, Gandhinagar | Whole of the State of Gujarat   |
| 7             | Joint Director of Agriculture (Seed), Office of the Directorate of Agriculture, Gujarat State, Gandhinagar     | Whole of the State of Gujarat   |
| 8             | Deputy Director of Agriculture (Seed), Office of the Directorate of Agriculture, Gujarat State, Gandhinagar    | Whole of the State of Gujarat   |
| 9             | Joint Director of Agriculture (Extention), Mehsana   | Whole of the Mehsana, Banaskantha, Patan, Sabarkantha and Arvalli District                    |
| 10            | Joint Director of Agriculture (Extention), Ahmedabad   | Whole of the Ahmedabad, Gandhinagar, Kheda and Anand District                                 |
| 11            | Joint Director of Agriculture (Extention), Vadodra   | Whole of the Vadodra, Chhotaudepur, Bharuch, Panchmahal, Dahod, Narmda and Mahisagar District |
| 12            | Joint Director of Agriculture (Extention), Surat   | Whole of the Surat, Valsad, Navsari, Dang and Tapi District                                   |
| 13            | Joint Director of Agriculture (Extention), Rajkot  | Whole of the Rajkot, Jamnagar, Kutch, Surendranagar, Morbi and Devbhumi dwarka District       |
| 14            | Joint Director of Agriculture (Extention), Junagadh  | Whole of the Junagadh, Amreli, Bhavnagar, Porbandar, Botad and Gir Somnath District           |
| 15            | Deputy Director of Agriculture (Extention), Palanpur, District: Banaskantha                                    | Whole of the Banaskantha District   |
| 16            | Assistant Director of Agriculture (Quality Control), Palanpur District: Banaskantha                            | Whole of the Banaskantha District   |
| 17            | Agriculture officer, Palanpur  | Whole Palanpur taluka of the Banaskantha District   |
| 18            | Agriculture officer, Vadgam  | Whole Vadgam taluka of the Banaskantha District   |
| 19            | Agriculture officer, Danta   | Whole Danta taluka of the Banaskantha District  |
| 20            | Agriculture officer, Dantiwada   | Whole Dantiwada taluka of the Banaskantha District  |
| 21            | Agriculture officer, Amirgadh  | Whole Amirgadh taluka of the Banaskantha District   |
| 22            | Agriculture officer, Deesa   | Whole Deesa taluka of the Banaskantha District  |
| 23            | Agriculture officer, Dhanera   | Whole Dhanera taluka of the Banaskantha District  |
| 24            | Agriculture officer, Kankarej  | Whole Kankarej taluka of the Banaskantha District   |
| 25            | Agriculture officer, Deodar  | Whole Deodar taluka of the Banaskantha District   |
| 26            | Agriculture officer, Vav   | Whole Vav taluka of the Banaskantha District  |
| 27            | Agriculture officer, Tharad  | Whole Tharad taluka of the Banaskantha District   |

| <b>Sr.No.</b> | <b>Designation of Officers</b>  | <b>Local Areas of Jurisdiction</b>               |
|---------------|---|--|
| <b>1</b>      | <b>2</b>  | <b>3</b>   |
| 28            | Agriculture officer, Bhabhar  | Whole Bhabhar taluka of the Banaskantha District |
| 29            | Agriculture officer, Suigam   | Whole Suigam taluka of the Banaskantha District  |
| 30            | Agriculture officer, Lakhni   | Whole Lakhni taluka of the Banaskantha District  |
| 31            | Deputy Director of Agriculture (Extention), Mehsana                                     | Whole of the Mehsana District                    |
| 32            | Assistant Director of Agriculture (Quality Control), Mehsana                            | Whole of the Mehsana District                    |
| 33            | Agriculture officer, Mehsana  | Whole Mehsana taluka of the Mehsana District     |
| 34            | Agriculture officer, Kadi   | Whole Kadi taluka of the Mehsana District        |
| 35            | Agriculture officer, Becharaji  | Whole Becharaji taluka of the Mehsana District   |
| 36            | Agriculture officer, Visnagar   | Whole Visnagar taluka of the Mehsana District    |
| 37            | Agriculture officer, Kheralu  | Whole Kheralu taluka of the Mehsana District     |
| 38            | Agriculture officer, Unjha  | Whole Unjha taluka of the Mehsana District       |
| 39            | Agriculture officer, Satlasana  | Whole Satlasana taluka of the Mehsana District   |
| 40            | Agriculture officer, Vijapur  | Whole Vijapur taluka of the Mehsana District     |
| 41            | Agriculture officer, Vadnagar   | Whole Vadnagar taluka of the Mehsana District    |
| 42            | Agriculture officer, Jotana   | Whole Jotana taluka of the Mehsana District      |
| 43            | Deputy Director of Agriculture (Extention), Patan                                       | Whole of the Patan District                      |
| 44            | Assistant Director of Agriculture (Quality Control), Patan                              | Whole of the Patan District                      |
| 45            | Agriculture officer, Patan  | Whole Patan taluka of Patan District             |
| 46            | Agriculture officer, Siddhpur   | Whole Siddhpur taluka of Patan District          |
| 47            | Agriculture officer, Chanasma   | Whole Chanasma taluka of Patan District          |
| 48            | Agriculture officer, Sami   | Whole Sami taluka of Patan District              |
| 49            | Agriculture officer, Santalpur  | Whole Santalpur taluka of Patan District         |
| 50            | Agriculture officer, Radhanpur  | Whole Radhanpur taluka of Patan District         |
| 51            | Agriculture officer, Harij  | Whole Harij taluka of Patan District             |
| 52            | Agriculture officer, Saraswati  | Whole Saraswati taluka of Patan District         |
| 53            | Agriculture Officer, Shankheshwar   | Whole Shankheshwar taluka of Patan District      |
| 54            | Deputy Director of Agriculture (Extention), Himmatnagar, District: Sabarkantha          | Whole of the Sabarkantha District                |
| 55            | Assistant Director of Agriculture (Quality Control), Himmatnagar, District: Sabarkantha | Whole of the Sabarkantha District                |
| 56            | Agriculture officer, Himmatnagar  | Whole Himmatnagar taluka of Sabarkantha District |
| 57            | Agriculture officer, Idar   | Whole Idar taluka of Sabarkantha District        |

| <b>Sr.No.</b> | <b>Designation of Officers</b>  | <b>Local Areas of Jurisdiction</b>                    |
|---------------|---|---|
| <b>1</b>      | <b>2</b>  | <b>3</b>  |
| 58            | Agriculture officer, Vadali   | Whole Vadali taluka of Sabarkantha District           |
| 59            | Agriculture officer, Khedbrahma   | Whole Khedbrahma taluka of Sabarkantha District       |
| 60            | Agriculture officer, Poshina  | Whole Poshina taluka of Sabarkantha District          |
| 61            | Agriculture officer, Vijaynagar   | Whole Vijaynagar taluka of Sabarkantha District       |
| 62            | Agriculture officer, Talod  | Whole Talod taluka of Sabarkantha District            |
| 63            | Agriculture officer, Prantij  | Whole Prantij taluka of Sabarkantha District          |
| 64            | Deputy Director of Agriculture (Extention), Modasa, District: Arvalli   | Whole of the Arvalli District                         |
| 65            | Assistant Director of Agriculture, Modasa C/o Office of the Deputy Director of Agriculture (Extention), Modasa, District: Arvalli | Whole of the Arvalli District                         |
| 66            | Agriculture officer, Bhiloda  | Whole Bhiloda taluka of the Arvalli District          |
| 67            | Agriculture officer, Meghraj  | Whole Meghraj taluka of the Arvalli District          |
| 68            | Agriculture officer, Modasa   | Whole Modasa taluka of the Arvalli District           |
| 69            | Agriculture officer, Dhansura   | Whole Dhansura taluka of the Arvalli District         |
| 70            | Agriculture officer, Malpur   | Whole Malpur taluka of the Arvalli District           |
| 71            | Agriculture officer, Bayad  | Whole Bayad taluka of the Arvalli District            |
| 72            | Deputy Director of Agriculture (Extension), Ahmedabad   | Whole of the Ahmedabad District                       |
| 73            | Assistant Director of Agriculture (Quality Control), Ahmedabad  | Whole of the Ahmedabad District                       |
| 74            | Agriculture officer, Ahmedabad City   | Whole Ahmedabad City taluka of the Ahmedabad District |
| 75            | Agriculture officer, Daskroi  | Whole Daskroi Taluka of the Ahmedabad District        |
| 76            | Agriculture officer, Dholka   | Whole Dholka taluka the Ahmedabad District            |
| 77            | Agriculture officer, Dhandhuka  | Whole Dhandhuka taluka of the Ahmedabad District      |
| 78            | Agriculture officer, Bavla  | Whole Bavla taluka of the Ahmedabad District          |
| 79            | Agriculture officer, Viramgam   | Whole Viramgam taluka of the Ahmedabad District       |
| 80            | Agriculture officer, Mandal   | Whole Mandal Taluka of the Ahmedabad District         |
| 81            | Agriculture officer, Detroj-Rampura   | Whole Detroj-Rampura taluka of the Ahmedabad District |
| 82            | Agriculture officer, Sanand   | Whole Sanand taluka of the Ahmedabad District         |



| <b>Sr.No.</b> | <b>Designation of Officers</b>  | <b>Local Areas of Jurisdiction</b>                   |
|---------------|---|--|
| <b>1</b>      | <b>2</b>  | <b>3</b>   |
| 83            | Agriculture officer, Dholera  | Whole Dholera Taluka of the Ahmedabad District       |
| 84            | Deputy Director of Agriculture (Extension), Gandhinagar                       | Whole of the Gandhinagar District                    |
| 85            | Assistant Director of Agriculture (Quality Control), Gandhinagar              | Whole of the Gandhinagar District                    |
| 86            | Agriculture officer, Gandhinagar  | Whole Gandhinagar taluka of the Gandhinagar District |
| 87            | Agriculture officer, Dahegam  | Whole Dahegam taluka of the Gandhinagar District     |
| 88            | Agriculture officer, Kalol  | Whole Kalol taluka of the Gandhinagar District       |
| 89            | Agriculture officer, Mansa  | Whole Mansa taluka of the Gandhinagar District       |
| 90            | Deputy Director of Agriculture (Extension), Nadiyad, District: Kheda          | Whole of the Kheda District                          |
| 91            | Assistant Director of Agriculture (Quality Control), Nadiyad, District: Kheda | Whole of the Kheda District                          |
| 92            | Agriculture officer, Nadiyad  | Whole Nadiyad taluka of the Kheda District           |
| 93            | Agriculture officer, Mahudha  | Whole Mahudha taluka of the Kheda District           |
| 94            | Agriculture officer, Matar  | Whole Matar taluka of the Kheda District             |
| 95            | Agriculture officer, Mahemdavad   | Whole Mahemdavad taluka of the Kheda District        |
| 96            | Agriculture officer, Kheda  | Whole Kheda Taluka of the Kheda District             |
| 97            | Agriculture officer, Kapadvanj  | Whole Kapadvanj taluka of the Kheda District         |
| 98            | Agriculture officer, Kathlal  | Whole Kathlal Taluka of the Kheda District           |
| 99            | Agriculture officer, Thasra   | Whole Thasra Taluka of the Kheda District            |
| 100           | Agriculture officer, Galteshwar   | Whole Galteshwar taluka of the Kheda District        |
| 101           | Agriculture officer, Vaso   | Whole Vaso taluka of the Kheda District              |
| 102           | Deputy Director of Agriculture (Extention), Anand                             | Whole of the Anand District                          |
| 103           | Assistant Director of Agriculture (Quality Control). Anand                    | Whole of the Anand District                          |
| 104           | Agriculture officer, Anand  | Whole Anand taluka of the Anand District             |
| 105           | Agriculture officer, Umreth   | Whole Umreth taluka othe Anand District              |
| 106           | Agriculture officer, Borsad   | Whole Borsad taluka of the Anand District            |
| 107           | Agriculture officer, Anklav   | Whole Anklav taluka of the Anand District            |
| 108           | Agriculture officer, Petlad   | Whole Petlad taluka of the Anand District            |
| 109           | Agriculture officer, Sojitra  | Whole Sojitra taluka of the Anand District           |
| 110           | Agriculture officer, Khambhat   | Whole Khambhat taluka of the Anand District          |

| <b>Sr.No.</b> | <b>Designation of Officers</b>  | <b>Local Areas of Jurisdiction</b>                  |
|---------------|---|---|
| <b>1</b>      | <b>2</b>  | <b>3</b>  |
| 111           | Agriculture officer, Tarapur  | Whole Tarapur taluka of the Anand District          |
| 112           | Deputy Director of Agriculture (Extension), Lunavada, District: Mahisagar   | Whole of the Mahisagar District                     |
| 113           | Assistant Director of Agriculture, Lunavada C/o Office of the Deputy Director of Agriculture (Extension), Lunavada, District: Mahisagar | Whole of the Mahisagar District                     |
| 114           | Agriculture officer, Lunavada   | Whole Lunavada taluka of the Mahisagar District     |
| 115           | Agriculture officer, Santrampur   | Whole Santrampur taluka of the Mahisagar District   |
| 116           | Agriculture officer, Kadana   | Whole Kadana taluka of the Mahisagar District       |
| 117           | Agriculture officer, Khanpur  | Whole Khanpur taluka of the Mahisagar District      |
| 118           | Agriculture officer, Balasinor  | Whole Balasinor taluka of the Mahisagar District    |
| 119           | Agriculture officer, Virpur   | Whole Virpur taluka of the Mahisagar District       |
| 120           | Deputy Director of Agriculture (Extension), Godhra, District: Panchmahal  | Whole of the Panchmahal District                    |
| 121           | Assistant Director of Agriculture (Quality Control), Godhra, District: Panchmahal   | Whole of the Panchmahal District                    |
| 122           | Agriculture officer, Godhra   | Whole Godhra taluka of the Panchmahal District      |
| 123           | Agriculture officer, Morva Hadaf  | Whole Morva Hadaf taluka of the Panchmahal District |
| 124           | Agriculture officer, Shahera  | Whole Shahera taluka of the Panchmahal District     |
| 125           | Agriculture officer, Halol  | Whole Halol taluka of the Panchmahal District       |
| 126           | Agriculture officer, Kalol  | Whole Kalol taluka of the Panchmahal District       |
| 127           | Agriculture officer, Jambughoda   | Whole Jambughoda taluka of the Panchmahal District  |
| 128           | Agriculture officer, Ghoghamba  | Whole Ghoghamba taluka of the Panchmahal District   |
| 129           | Deputy Director of Agriculture (Extension), Dahod   | Whole of the Dahod District                         |
| 130           | Assistant Director of Agriculture (Quality Control), Dahod  | Whole of the Dahod District                         |
| 131           | Agriculture officer, Dahod  | Whole Dahod taluka of the Dahod District            |
| 132           | Agriculture officer, Zalod  | Whole Zalod taluka of the Dahod District            |
| 133           | Agriculture officer, Fatepura   | Whole Fatepura taluka of the Dahod District         |
| 134           | Agriculture officer, Garbada  | Whole Garbada taluka of the Dahod District          |
| 135           | Agriculture officer, Limkheda   | Whole Limkheda taluka of the Dahod District         |

| <b>Sr.No.</b> | <b>Designation of Officers</b>   | <b>Local Areas of Jurisdiction</b>                      |
|---------------|--|---|
| <b>1</b>      | <b>2</b>   | <b>3</b>  |
| 136           | Agriculture officer, Dhanpur   | Whole Dhanpur taluka of the Dahod District              |
| 137           | Agriculture officer, Devgadhi-Baria  | Whole Devgadhi-Baria taluka of the Dahod District       |
| 138           | Agriculture officer, Sanjeli   | Whole Sanjeli taluka of the Dahod District              |
| 139           | Deputy Director of Agriculture (Extension), Vadodara   | Whole of the Vadodara District                          |
| 140           | Assistant Director of Agriculture (Quality Control), Vadodara  | Whole of the Vadodara District                          |
| 141           | Agriculture officer, Vadodara  | Whole Vadodara taluka of the Vadodara District          |
| 142           | Agriculture officer, Vaghodia  | Whole Vaghodia taluka of the Vadodara District          |
| 143           | Agriculture officer, Savli   | Whole Savli taluka of the Vadodara District             |
| 144           | Agriculture officer, Dabhoi  | Whole Dabhoi taluka of the Vadodara District            |
| 145           | Agriculture officer, Shinor  | Whole Shinor taluka of the Vadodara District            |
| 146           | Agriculture officer, Padra   | Whole Padra taluka of the Vadodara District             |
| 147           | Agriculture officer, Karjan  | Whole Karjan taluka of the Vadodara District            |
| 148           | Agriculture officer, Desar   | Whole Desar taluka of the Vadodara District             |
| 149           | Deputy Director of Agriculture (Extension), Chhotaudepur   | Whole of the Chhotaudepur District                      |
| 150           | Assistant Director of Agriculture, Chhotaudepur C/o Office of the Deputy Director of Agriculture (Extension), Chhotaudepur | Whole of the Chhotaudepur District                      |
| 151           | Agriculture officer, Jetpur - Pavi   | Whole Jetpur - Pavi taluka of the Chhotaudepur District |
| 152           | Agriculture officer, Chhotaudepur  | Whole Chhotaudepur taluka of the Chhotaudepur District  |
| 153           | Agriculture officer, Kavant  | Whole Kavant taluka of the Chhotaudepur District        |
| 154           | Agriculture officer, Sankheda  | Whole Sankheda taluka of the Chhotaudepur District      |
| 155           | Agriculture officer, Nasvadi   | Whole Nasvadi taluka of the Chhotaudepur District       |
| 156           | Agriculture officer, Bodeli  | Whole Bodeli taluka of the Chhotaudepur District        |
| 157           | Deputy Director of Agriculture (Extension), Bharuch  | Whole of the Bharuch District                           |
| 158           | Assistant Director of Agriculture (Quality Control), Bharuch   | Whole of the Bharuch District                           |
| 159           | Agriculture officer, Bharuch   | Whole Bharuch taluka of the Bharuch District            |

| Sr.No. | Designation of Officers  | Local Areas of Jurisdiction                     |
|--------|--|---|
| 1      | 2  | 3   |
| 160    | Agriculture officer, Ankleshwar  | Whole Ankleshwar taluka of the Bharuch District |
| 161    | Agriculture officer, Hansot  | Whole Hansot taluka of the Bharuch District     |
| 162    | Agriculture officer, Zagadia   | Whole Zagadia taluka of the Bharuch District    |
| 163    | Agriculture officer, Valia   | Whole Valia taluka of the Bharuch District      |
| 164    | Agriculture officer, Amod  | Whole Amod taluka of the Bharuch District       |
| 165    | Agriculture officer, Jambusar  | Whole Jambusar taluka of the Bharuch District   |
| 166    | Agriculture officer, Vaghara   | Whole Vaghara taluka of the Bharuch District    |
| 167    | Agriculture officer, Netrang   | Whole Netrang taluka of the Bharuch District    |
| 168    | Deputy Director of Agriculture (Extension), Rajpipla, District: Narmada          | Whole of the Narmada District                   |
| 169    | Assistant Director of Agriculture (Quality Control), Rajpipla, District: Narmada | Whole of the Narmada District                   |
| 170    | Agriculture officer, Nandod  | Whole Nandod taluka of the Narmda District      |
| 171    | Agriculture officer, Tilakwada   | Whole Tilakwada taluka of the Narmda District   |
| 172    | Agriculture officer, Dediapada   | Whole Dediapada taluka of the Narmda District   |
| 173    | Agriculture officer, Sagbara   | Whole Sagbara taluka of the Narmda District     |
| 174    | Deputy Director of Agriculture (Extension), Surat                                | Whole of the Surat & Tapi District              |
| 175    | Assistant Director of Agriculture (Quality Control), Surat                       | Whole of the Surat & Tapi District              |
| 176    | Agriculture officer, Surat City  | Whole Surat City taluka of the Surat District   |
| 177    | Agriculture officer, Kamrej  | Whole Kamrej taluka of the Surat District       |
| 178    | Agriculture officer, Palsana   | Whole Palsana taluka of the Surat District      |
| 179    | Agriculture officer, Bardoli   | Whole Bardoli taluka of the Surat District      |
| 180    | Agriculture officer, Mahuva  | Whole Mahuva taluka of the Surat District       |
| 181    | Agriculture officer, Mandvi  | Whole Mandvi taluka of the Surat District       |
| 182    | Agriculture officer, Olpad   | Whole Olpad taluka of the Surat District        |
| 183    | Agriculture officer, Mangrol   | Whole Mangrol taluka of the Surat District      |
| 184    | Agriculture officer, Umarapada   | Whole Umarapada taluka of the Surat District    |
| 185    | Agriculture officer, Choryasi  | Whole Choryasi taluka of the Surat District     |
| 186    | Agriculture officer, Vyara   | Whole Vyara taluka of the Tapi District         |
| 187    | Agriculture officer, Songadh   | Whole Songadh taluka of the Tapi District       |
| 188    | Agriculture officer, Uchchhal  | Whole Uchchhal taluka of the Tapi District      |
| 189    | Agriculture officer, Nizar   | Whole Nizar taluka of the Tapi District         |
| 190    | Agriculture officer, Valod   | Whole Valod taluka of the Tapi District         |

| <b>Sr.No.</b> | <b>Designation of Officers</b>                                     | <b>Local Areas of Jurisdiction</b>                 |
|---------------|--|--|
| <b>1</b>      | <b>2</b>   | <b>3</b>   |
| 191           | Agriculture officer, Kukarmunda                                    | Whole Kukarmunda tauka of the Tapi District        |
| 192           | Agriculture officer, Dolvan  | Whole Dolvan taluka of the Tapi District           |
| 193           | Deputy Director of Agriculture (Extension), Valsad                 | Whole of the Valsad District                       |
| 194           | Assistant Director of Agriculture ( Quality Control), Valsad       | Whole of the Valsad District                       |
| 195           | Agriculture officer, Valsad  | Whole Valsad taluka of the Valsad District         |
| 196           | Agriculture officer, Dharampur                                     | Whole Dharampur taluka of the Valsad District      |
| 197           | Agriculture officer, Kaparada                                      | Whole Kaparada taluka of the Valsad District       |
| 198           | Agriculture officer, Pardi   | Whole Pardi taluka of the Valsad District          |
| 199           | Agriculture officer, Umargam                                       | Whole Umargam taluka of the Valsad District        |
| 200           | Agriculture officer, Vapi  | Whole Vapi taluka of the Valsad District           |
| 201           | Deputy Director of Agriculture (Extension), Navsari                | Whole of the Navsari Dang District                 |
| 202           | Assistant Director of Agriculture (Quality Control), Navsari       | Whole of the Navsari of the Dang District          |
| 203           | Agriculture officer, Navsari                                       | Whole Navsari taluka of the Navsari district       |
| 204           | Agriculture officer, Chikhali                                      | Whole Chikhali taluka of the Navsari district      |
| 205           | Agriculture officer, Gandevi                                       | Whole Gandevi taluka of the Navsari district       |
| 206           | Agriculture officer, Vansda  | Whole Vansda taluka of the Navsari district        |
| 207           | Agriculture officer, Jalalpur                                      | Whole Jalalpur taluka of the Navsari district      |
| 208           | Agriculture officer, khergam                                       | Whole khergam taluka of the Navsari district       |
| 209           | Agriculture officer, Ahwa  | Whole Ahwa taluka of the Dang District             |
| 210           | Agriculture officer, Subir   | Whole Subir taluka of the Dang District            |
| 211           | Agriculture officer, Vaghai  | Whole Vaghai taluka of the Dang District           |
| 212           | Deputy Director of Agriculture (Extension), Surendranagar          | Whole of the Surendranagar District                |
| 213           | Assistant Director of Agriculture (Quality Control), Surendranagar | Whole of the Surendranagar District                |
| 214           | Agriculture officer, Vadhvan                                       | Whole Vadhvan taluka of the Surendranagar District |
| 215           | Agriculture officer, Lakhtar                                       | Whole Lakhtar taluka of the Surendranagar District |
| 216           | Agriculture officer, Limdi   | Whole Limdi taluka of the Surendranagar District   |
| 217           | Agriculture officer, Chotila                                       | Whole Chotila taluka of the Surendranagar District |
| 218           | Agriculture officer, Sayla   | Whole Sayla taluka of the Surendranagar District   |

| <b>Sr.No.</b> | <b>Designation of Officers</b>   | <b>Local Areas of Jurisdiction</b>                     |
|---------------|--|--|
| <b>1</b>      | <b>2</b>   | <b>3</b>   |
| 219           | Agriculture officer, Dhrangadhra   | Whole Dhrangadhra taluka of the Surendranagar District |
| 220           | Agriculture officer, Thangadh  | Whole Thangadh taluka of the Surendranagar District    |
| 221           | Agriculture officer, Dasada  | Whole Dasada taluka of the Surendranagar District      |
| 222           | Agriculture officer, Muli  | Whole Muli taluka of the Surendranagar District        |
| 223           | Agriculture officer, Chuda   | Whole Chuda taluka of the Surendranagar District       |
| 224           | Deputy Director of Agriculture (Extension), Rajkot                                 | Whole of the Rajkot District                           |
| 225           | Assistant Director of Agriculture (Quality Control), Rajkot                        | Whole of the Rajkot District                           |
| 226           | Agriculture officer, Rajkot  | Whole Rajkot taluka of the Rajkot District             |
| 227           | Agriculture officer, Vinchhiya   | Whole Vinchhiya taluka of the Rajkot District          |
| 228           | Agriculture officer, Gondal  | Whole Gondal taluka of the Rajkot District             |
| 229           | Agriculture officer, Jasdan  | Whole Jasdan taluka of the Rajkot District             |
| 230           | Agriculture officer, Paddhari  | Whole Paddhari taluka of the Rajkot District           |
| 231           | Agriculture officer, Lodhika   | Whole Lodhika taluka of the Rajkot District            |
| 232           | Agriculture officer, Kotda-sangani   | Whole Kotda-sangani taluka of the Rajkot District      |
| 233           | Agriculture officer, Dhoraji   | Whole Dhoraji taluka of the Rajkot District            |
| 234           | Agriculture officer, Upleta  | Whole Upleta taluka of the Rajkot District             |
| 235           | Agriculture officer, Jetpur  | Whole Jetpur taluka of the Rajkot District             |
| 236           | Agriculture officer, JamKandorana  | Whole JamKandorana taluka of the Rajkot District       |
| 237           | Deputy Director of Agriculture (Extension), Jamnagar                               | Whole of the Jamnagar District                         |
| 238           | Assistant Director of Agriculture (Quality Control), Jamnagar                      | Whole of the Jamnagar District                         |
| 239           | Agriculture officer, Jamnagar  | Whole Jamnagar taluka of the Jamnagar District         |
| 240           | Agriculture officer, Lalpur  | Whole Lalpur taluka of the Jamnagar District           |
| 241           | Agriculture officer, Kalavad   | Whole Kalavad taluka of the Jamnagar District          |
| 242           | Agriculture officer, Dhrol   | Whole Dhrol taluka of the Jamnagar District            |
| 243           | Agriculture officer, Jodiya  | Whole Jodiya taluka of the Jamnagar District           |
| 244           | Agriculture officer, Jamjodhpur  | Whole Jamjodhpur taluka of the Jamnagar District       |
| 245           | Deputy Director of Agriculture (Extension), Khambhaliya, District: Devbhumi dwarka | Whole of the Devbhumi dwarka District                  |

| <b>Sr.No.</b> | <b>Designation of Officers</b>  | <b>Local Areas of Jurisdiction</b>                               |
|---------------|---|--|
| <b>1</b>      | <b>2</b>  | <b>3</b>   |
| 246           | Assistant Director of Agriculture, Khambhaliya C/o Deputy Director of Agriculture (Extension), Khambhaliya, District: Devbhumi dwarka | Whole of the Devbhumi dwarka District                            |
| 247           | Agriculture officer, Bhanvad  | Whole Bhanvad taluka of the Devbhumi dwarka District             |
| 248           | Agriculture officer. Kalyanpur  | Whole Kalyanpur taluka of the Devbhumi dwarka District           |
| 249           | Agriculture officer, Khambhaliya  | Whole Khambhaliya taluka of the Devbhumi dwarka District         |
| 250           | Agriculture officer, Okhamandal (Dwarka)  | Whole Okhamandal (Dwarka) taluka of the Devbhumi dwarka District |
| 251           | Deputy Director of Agriculture ( Extension ), Bhuj, District: Kutch   | Whole Kutch District   |
| 252           | Assistant Director of Agriculture (Quality Control), Bhuj, District: Kutch  | Whole Kutch District   |
| 253           | Agriculture officer, Bhuj   | Whole Bhuj taluka of the Kutch District                          |
| 254           | Agriculture officer, Mandvi   | Whole Mandvi taluka of the Kutch District                        |
| 255           | Agriculture officer, Nakhatrana   | Whole Nakhatrana taluka of the Kutch District                    |
| 256           | Agriculture officer, Abdasa   | Whole Abdasa taluka of the Kutch District                        |
| 257           | Agriculture officer, Lakhpat  | Whole Lakhpat taluka of the Kutch District                       |
| 258           | Agriculture officer, Gandhidham   | Whole Gandhidham taluka of the Kutch District                    |
| 259           | Agriculture officer, Bhachau  | Whole Bhachau taluka of the Kutch District                       |
| 260           | Agriculture officer, Rapar  | Whole Rapar taluka of the Kutch District                         |
| 261           | Agriculture officer, Mundra   | Whole Mundra taluka of the Kutch District                        |
| 262           | Agriculture officer, Anjar  | Whole Anjar taluka of the Kutch District                         |
| 263           | Deputy Director of Agriculture (Extension), Morbi   | Whole Morbi District   |
| 264           | Assistant Director of Agriculture, Morbi C/o Office of the Deputy Director of Agriculture (Extension), Morbi                          | Whole Morbi District   |
| 265           | Agriculture officer, Halvad   | Whole Halvad taluka of the Morbi District                        |
| 266           | Agriculture officer, Morbi  | Whole Morbi taluka of the Morbi District                         |
| 267           | Agriculture officer, Vankaner   | Whole Vankaner taluka of the Morbi District                      |
| 268           | Agriculture officer, Maliya (Miyana)  | Whole Maliya (Miyana) taluka of the Morbi District               |
| 269           | Agriculture officer, Tankara  | Whole Tankara taluka of the Morbi District                       |
| 270           | Deputy Director of Agriculture (Extention), Junagadh  | Whole of the Junagadh District                                   |
| 271           | Assistant Director of Agriculture (Quality Control), Junagadh   | Whole of the Junagadh District                                   |
| 272           | Agriculture officer, Junagadh City  | Whole Junagadh City taluka of the Junagadh District              |

| <b>Sr.No.</b> | <b>Designation of Officers</b>                                 | <b>Local Areas of Jurisdiction</b>                  |
|---------------|--|---|
| <b>1</b>      | <b>2</b>   | <b>3</b>  |
| 273           | Agriculture officer, Junagadh                                  | Whole Junagadh taluka of the Junagadh District      |
| 274           | Agriculture officer, Bhesan                                    | Whole Bhesan taluka of the Junagadh District        |
| 275           | Agriculture officer, Visavadar                                 | Whole Visavadar taluka of the Junagadh District     |
| 276           | Agriculture officer, Mendarda                                  | Whole Mendarda taluka of the Junagadh District      |
| 277           | Agriculture officer, Maliya-Hatina                             | Whole Maliya-Hatina taluka of the Junagadh District |
| 278           | Agriculture officer Keshod                                     | Whole Keshod taluka of the Junagadh District        |
| 279           | Agriculture officer, Mangrol                                   | Whole Mangrol taluka of the Junagadh District       |
| 280           | Agriculture officer, Vanthali                                  | Whole Vanthali taluka of the Junagadh District      |
| 281           | Agriculture officer, Manavadar                                 | Whole Manavadar taluka of the Junagadh District     |
| 282           | Deputy Director of Agriculture (Extention), Porbandar          | Whole of the Porbandar District                     |
| 283           | Assistant Director of Agriculture (Quality Control), Porbandar | Whole of the Porbandar District                     |
| 284           | Agriculture officer, Porbandar                                 | Whole Porbandar taluka of the Porbandar District    |
| 285           | Agriculture officer, Ranavav                                   | Whole Ranavav taluka of the Porbandar District      |
| 286           | Agriculture officer, Kutiyana                                  | Whole Kutiyana taluka of the Porbandar District     |
| 287           | Deputy Director of Agriculture (Extention), Amreli             | Whole of the Amreli District                        |
| 288           | Assistant Director of Agriculture (Quality Control), Amreli    | Whole of the Amreli District                        |
| 289           | Agriculture officer, Amreli                                    | Whole Amreli taluka of the Amreli District          |
| 290           | Agriculture officer, Liliya                                    | Whole Liliya taluka of the Amreli District          |
| 291           | Agriculture officer, Lathi                                     | Whole Lathi taluka of the Amreli District           |
| 292           | Agriculture officer, Dhari                                     | Whole Dhari taluka of the Amreli District           |
| 293           | Agriculture officer, Babra                                     | Whole Babra taluka of the Amreli District           |
| 294           | Agriculture officer, Vadia                                     | Whole Vadia taluka of the Amreli District           |
| 295           | Agriculture officer, Bagasara                                  | Whole Bagasara taluka of the Amreli District        |
| 296           | Agriculture officer, Rajula                                    | Whole Rajula taluka of the Amreli District          |
| 297           | Agriculture officer, Savarkundla                               | Whole Savarkundla taluka of the Amreli District     |
| 298           | Agriculture officer, Jafarabad                                 | Whole Jafarabad taluka of the Amreli District       |
| 299           | Agriculture officer, Khambha                                   | Whole Khambha taluka of the Amreli District         |
| 300           | Deputy Director of Agriculture (Extention), Bhavnagar          | Whole of the Bhavnagar District                     |



| <b>Sr.No.</b> | <b>Designation of Officers</b>  | <b>Local Areas of Jurisdiction</b>                 |
|---------------|---|--|
| <b>1</b>      | <b>2</b>  | <b>3</b>   |
| 301           | Assistant Director of Agriculture (Quality Control), Bhavnagar  | Whole of the Bhavnagar District                    |
| 302           | Agriculture officer, Bhavnagar  | Whole Bhavnagar taluka of the Bhavnagar District   |
| 303           | Agriculture officer, Ghogha   | Whole Ghogha of the Bhavnagar District             |
| 304           | Agriculture officer, Vallbhipur   | Whole Vallbhipur of the Bhavnagar District         |
| 305           | Agriculture officer, Umralla  | Whole Umralla of the Bhavnagar District            |
| 306           | Agriculture officer, Palitana   | Whole Palitana of the Bhavnagar District           |
| 307           | Agriculture officer, Gariyadhar   | Whole Gariyadhar of the Bhavnagar District         |
| 308           | Agriculture officer, Shihor   | Whole Shihor of the Bhavnagar District             |
| 309           | Agriculture officer, Talaja   | Whole Talaja of the Bhavnagar District             |
| 310           | Agriculture officer, Mahuva   | Whole Mahuva of the Bhavnagar District             |
| 311           | Agriculture officer, Jesar  | Whole Jesar of the Bhavnagar District              |
| 312           | Deputy Director of Agriculture (Extention), Veraval, District: Gir Somnath  | Whole of the Gir Somnath District                  |
| 313           | Assistant Director of Agriculture, Veraval C/o Office of the Deputy Director of Agriculture (Extension), Veraval, District: Gir Somnath | Whole of the Gir Somnath District                  |
| 314           | Agriculture officer, Veraval  | Whole Veraval taluka of the Gir Somnath District   |
| 315           | Agriculture officer, Una  | Whole Una taluka of the Gir Somnath District       |
| 316           | Agriculture officer, Talala   | Whole Talala taluka of the Gir Somnath District    |
| 317           | Agriculture officer, Sutrapada  | Whole Sutrapada taluka of the Gir Somnath District |
| 318           | Agriculture officer, Kodinar  | Whole Kodinar taluka of the Gir Somnath District   |
| 319           | Agriculture officer, Girgadhda  | Whole Girgadhda taluka of the Gir Somnath District |
| 320           | Deputy Director of Agriculture (Extension), Botad   | Whole of the Botad District                        |
| 321           | Assistant Director of Agriculture, Botad C/o Office of the Deputy Director of Agriculture (Extension), Botad                            | Whole of the Botad District                        |
| 322           | Agriculture officer, Gadhada  | Whole Gadhada taluka of the Botad District         |
| 323           | Agriculture officer, Botad  | Whole Botad taluka of the Botad District           |
| 324           | Agriculture officer, Barvala  | Whole Barvala taluka of the Botad District         |
| 325           | Agriculture officer, Ranpur   | Whole Ranpur taluka of the Botad District          |

By order and in the name of the Governor of Gujarat,

**BHAVITA RATHOD,**  
Under Secretary to Government.



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# The Gujarat Government Gazette

**EXTRAORDINARY**  
**PUBLISHED BY AUTHORITY**

Vol. LIX ]

TUESDAY, JANUARY 23, 2018/MAGHA 3, 1939

Separate paging is given to this Part in order that it may be filed as a Separate Compilation.

## PART IV-A

**Rules and Orders (Other than those published in Parts I, I-A, and I-L) made  
by the Government of Gujarat under the Central Acts**

### FOREST AND ENVIRONMENT DEPARTMENT, NOTIFICATION

Sachivalaya, Gandhinagar.

Dated the 23<sup>rd</sup> January, 2018.

#### Constitution of India.

**No.GVN/2018(1)/RCT/1816/1364/D-2:-** In exercise of the powers conferred by the proviso to article 309 of the Constitution of India, the Governor of Gujarat hereby makes the following rules to provide for regulating the conditions of service of persons appointed to the post of Forester, Class III, or Forestry Extension Assistant, Class III, in the subordinate services of the Principal Chief Conservator of Forest and Head of Forest Force, Gujarat State, under the Forest and Environment Department, in so far as they relate to passing of the Departmental Examination, for promotion to the post of Range Forest Officer, class II, namely:-

#### 1. Short title, extent and commencement. -

- (1) These rules may be called the Range Forest Officer, Class II, (Departmental Examination) Rules, 2018.
- (2) They shall come into force on the date of their publication in the *Official Gazette*.
- (3) They shall apply to the persons who are appointed as Forester, Class III or Forestry Extension Assistant, Class III, in the subordinate services of the Principal Chief Conservator of Forest and Head of Forest Force, Gujarat State, Gandhinagar under the Forest and Environment Department by promotion or otherwise,-

#### 2. Definition. - In these rules, unless the context otherwise requires,-

- (a) “Appendix” means an Appendix appended to these rules;
- (b) “appointed date” means the date on which these rules shall come into force;
- (c) “Board” means the Gujarat Subordinate Service Selection Board, Gandhinagar;

- (d) “Examination” means the departmental examination prescribed under these rules for promotion to the post of Range Forest Officer, Class II, in the subordinate services of the Forest and Environment Department;
- (e) “relevant examination” means the respective departmental examination prescribed under these rules as a prerequisite for promotion to the post of Range Forest Officer, Class II;
- (f) “Specified chances” means the number of chances specified in these rules within which a person is required to pass the relevant examination;
- (g) “Specified period” means the period specified in these rules within which a person is required to pass the relevant examination.

### **3. Eligibility to appear in the Examination and availability of Chances. –**

- (1) To be eligible for promotion to the post of Range Forest Officer, Class II, a person shall be required to pass the examination within a period of three years and within three chances from the date of his completing three years continuous service after his regular appointment to the lower post:

Provided that, in case of a person who has a last chance, if the period for passing the examination as provided in the rules, expires before the date of holding examination of the next examination, the said period shall be deemed to have been extended until the date of declaration of the result of the examination:

Provided further that, a person belonging to the Scheduled Caste or Scheduled Tribe may be given one more chance which shall have to be availed of within a period of one year from the date of the expiry of the period mentioned in these rules:

- (2) If a person fails to pass the examination referred to in this rule within the specified period and specified chances, he shall, not with standing such failure, be eligible to appear at any time in the Examination on payment of an examination fee as may be determined by the Government from time to time and if he passes the said examination, he shall be eligible for promotion:

Provided that, a person shall not be entitled to claim seniority over those persons who have passed the relevant examination earlier than him and also have been promoted regularly to the higher post before he became eligible for such promotion on passing the relevant examination.

### **4. Holding of Examination. –**

- (1) The Board shall hold relevant examination twice in a year.
- (2) The place, date and time for holding the relevant examination shall be communicated by the Board to the Principal Chief Conservator of Forest and Head of Forest Force, Gujarat State, Gandhinagar under intimation of the Secretary to the Government of Gujarat, Forest and Environment Department. The Principal Chief Conservator of Forest and Head of Forest Force, Gujarat State, Gandhinagar shall communicate this directly to the candidate under the intimation to the Board.

### **5. Paper and Syllabus. -**

- (1) The syllabus of the relevant examination shall be as specified in Appendix ‘A’.
- (2) The relevant examination shall consist of five papers each of hundred mark, the relevant examination shall consist of Multiple Choice Questions except paper-V, which will be descriptive.

- (3) The candidate shall be allowed to answer the entire subject of paper – I to V with the help of books.

**Explanation.-** with books means original book of the subjects having bare acts and or Rules without any commentaries or case laws and includes manual issued under the Act published or approved by the Government.

**6. Medium of the Examination.-**

The medium of the examination shall be Gujarati or English as the instruction given in the question paper.

**7. Prohibition to use certain devices in the Examination Hall.**

The candidates shall not be allowed to carry with him any other electronic communication devices like cellular phone, calculator, pager, etc. in the examination hall.

**8. Application for appearing in the Examination. -**

- (1) Forester, Class III or Forestry Extension Assistant, Class III, who desires to appear at the relevant examination, shall submit his application in the Form as specified in Appendix 'B' to the Principal Chief Conservator of Forest and Head of Forest Force, Gujarat State, Gandhinagar for enlisting his name as a candidate for such examination at least sixty days before the date of the commencement of the examination.
- (2) The Principal Chief Conservator of Forest and Head of Forest Force, Gujarat State, Gandhinagar shall scrutinise the application with regard to his eligibility for appearing at the relevant examination and forward the same to the Board along with the Certificate of Eligibility as specified in Appendix 'C'.
- (3) If the applicants subsequently decides not to appear at the examination, he shall give intimation there of to the Board through the Principal Chief Conservator of Forest and Head of Forest Force, Gujarat State, Gandhinagar, at least thirty days before the date of the commencement to the examination.
- (4) In the event of any person failing to appear at the examination after having enlisted his name as a candidate for appearing there at but without intimating referred to in sub-rule (3), he shall be deemed to have lost one chance to pass the examination.
- (5) The Board shall admit the candidate to the examination on the strength of the Certificate issued by the Principal Chief Conservator of Forest and Head of Forest Force, Gujarat State, Gandhinagar that he is eligible to appear at such examination:

Provided that, the Principal Chief Conservator of Forest and Head of Forest Force, Gujarat State, Gandhinagar may condone the failure on the part of the person to give intimation referred to in sub- rule (3), and the consequences arising there from if it is satisfied that the person had failed to give the intimation within time for reasons beyond his control.

**9. Qualifying Standard for passing examination. –**

- (1) The standard for passing the examination shall be fifty per cent. (50%) of the total marks assigned to each paper.
- (2) An unsuccessful candidate who secures sixty per cent or more marks in any one or more papers shall be exempted from appearing in those papers at the subsequent examinations.
- (3) A candidate who has secured 80% (eighty per cent.) or more aggregate marks in the examination shall be paid cash amount as an incentive as determined by the Government.

**10. Publication of result. -**

The Board shall publish the result of the examination in the Gujarat Government Gazette and also communicate the same to the Government, Forest and Environment Department and the Principal Chief Conservator of Forest and Head of Forest Force, Gujarat State, Gandhinagar, which shall intimate the result to the candidate.

**APPENDIX “A”**

(See rule 5)

**(Syllabus for Departmental Examination of Range Forest Officer)****Paper I Service matters. Mark: 100, Duration: 2 Hrs (with Books)**

- (1) The Gujarat Civil Services (Conduct) Rules, 1971.
- (2) The Gujarat Civil Services (Discipline and Appeal) Rules, 1971.
- (3) The Gujarat Civil Services (Classification and Recruitment) General Rules, 1967.
- (4) Manual of Departmental Enquiries.
- (5) Prevention of Corruption Act, 1988.

**Paper II Financial matters-1, Marks: 100, Duration: 2 Hrs (with Books)**

- (1) Introduction to Indian Government Accounts and Audit except the following: Chapters 7, 9, Part C. D. E. Chapters 18, 21, 22, 23, 31, 32, 33, 34, 36, (Paras: 76 to 776, to 781 to 785) Chapters 37, 38, 39.
- (2) The Gujarat Budget Manual Volume - I and II
- (3) The Bombay Contingency Expenditure Rules, 1959
- (4) The Gujarat Treasury Rules, 2000.
- (5) The Gujarat Financial Rules, 1971
- (6) The Gujarat Civil Service Rules, 2002 (Vol. I to VIII)

**Paper III Judicial matters, Marks: 100, Duration: 2 Hrs (with Books)**

- (1) Indian Penal Code-Chapters II and IV. section 199, Chapters IX, IX-A., X, XI, XVI, XVII, XVIII sections 463 to 477 and Chapter XXI sections 499 to 600.
- (2) Code of Criminal Procedure, 1898 Chapters II, III, IV, VIII, IX, XI, XXIX, XXXVII, XXXVIII.
- (3) (i) Indian Evidence Act, 1872-section 1 to 115.  
(ii) Criminal Procedure Code, 1973.  
(iii) The Arms Act, 1959.

**Paper IV Community Development and Panchayati Raj, Marks: 100, Duration: 2 Hrs (with Books)**

- (1) Constitution of India
- (2) Community project and Panchayati Raj
- (a) The Principles of Community Development
  - (i) Extension, its Organization and methods.
  - (ii) Background of Panchayati Raj and Panchayati Raj in Gujarat.

**Paper V Specialised Subjects 100 marks (with Books) (3 Hours)**

- (1) The Gujarat Land Revenue Code, 1879 (Bom. Act V 1879):
  - (i) Chapters I and II.
  - (ii) Chapter V sections 37 to 44.
  - (iii) Chapter VI section 62.
  - (iv) Chapter IX.
- (2) The Gujarat Land Revenue Rules, 1921:
  - (i) Rules 24 to 28 (Boundary marks)
  - (ii) Rules 58 to 63 (Trees and Forest Rights)
  - (iii) Rules 64-65.
- (3) The Indian Forest Act, 1927 (XVI of 1927).
- (4) The Wild Life (Protection) Act, 1972.
- (5) The Forests (Conservation) Act, 1980 and Rules there under.
- (6) The Saurashtra Felling of Trees (Infliction and Punishment) Act, 1951 and Rules there under.
- (7) The Gujarat Forest Manual Volumes I and II.
- (8) The Gujarat State Minor Forests Produce Trade Nationalization Act 1979.
- (9) The Customs Act.
- (10) The Gujarat Prohibition Act, 1949 as in force and which apply to the Forest Department of Gujarat.

**APPENDIX 'B'****(See rule 8(1))****Application for appearing in Departmental Examination of Range Forest Officer**

|     |  |  |
|-----|--|--|
| 1.  | Applicant's name in full (Surname first) ( In English and Gujarati).   |  |
| 2.  | Designation ( In English and Gujarati).  |  |
| 3.  | Name of the office in which serving at present.  |  |
| 4.  | Birth date and age at the time of this examination.  |  |
| 5.  | Date of appointment and total years of service.  |  |
| 6.  | Whether the applicant had appeared at the Examination previously if so -   |  |
|     | (a)Month and year of examination at which he appeared.   |  |
|     | (b)Whether any exemption is earned. If so, details of marks, Year of examination and subject should be given.  |  |
|     | (c)Whether the applicant intends to avail of exemptions earned ? State "Yes" or "No"<br>(The choice will be treated as final and no change shall be allowed).  |  |
| 7.  | Authority of the Rule under which the applicant has to appear for the examination.   |  |
| 8.  | Number of chances and time limit within which the applicant is required to pass the examination (date of expiry of the period for appearing at the examination should be mentioned).                         |  |
| 9.  | Number of trials exhausted.  |  |
| 10. | Whether additional (special chance) has been granted? Number and date of orders, under which the additional chance has been granted to the applicant should be specified and a copy thereof should be sent). |  |
| 11. | Purpose of passing the examination (e.g. confirmation, retention in Government service, promotion, etc.).  |  |
| 12. | Whether the applicant is eligible to appear at the examination according to the rules of the Departmental Examination.   |  |
| 13. | Number and date of orders relaxing age and service limit from competent authority (copies of orders should be attached).   |  |
| 14. | Remarks, if any.   |  |

Place:

( )

Date:

Signature of the Applicant

**APPENDIX 'C'****(See rule 8(2))****CERTIFICATE OF ELIGIBILITY**

Certified that -

(1) The above particulars are verified and found correct. Shri/Smt./Kum..... is eligible to appear at the Departmental Examination for promotion to the post of Range Forest Officer to be held in .....20....

(2) \* Necessary fee is paid; copy of *Challan* is attached herewith.

(3) \*Candidate is granted additional chance; a copy of order is attached.

Place:

Date:

(Signature and designation of the

Head of Department/Office)

\* Strike out whichever is not applicable.

By Order and in the name of the Governor of Gujarat,

**G. J. DAVE,**

Joint Secretary to Government.

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# The Gujarat Government Gazette

## EXTRAORDINARY

PUBLISHED BY AUTHORITY

Vol. LIX ]

THURSDAY, JANUARY 25, 2018/MAGHA 5, 1939

Separate paging is given to this Part in order that it may be filed as a Separate Compilation.

### PART IV-A

Rules and Orders (Other than those published in Parts I, I-A, and I-L) made  
by the Government of Gujarat under the Central Acts

#### FOOD, CIVIL SUPPLIES AND CONSUMER AFFAIRS DEPARTMENT

#### ORDER

Sachivalaya, Gandhinagar, 25<sup>th</sup> January, 2018.

**No.GTH/2018/3/ECA/102014/GOI-1/B** :- The following Notification issued by the Government of India, Ministry of Consumer Affairs, Food and Public Distribution regarding Onion Stock limit dated 27/12/2017 notification no: S.O. 4079(E) is republished for general information of public.

#### MINISTRY OF CONSUMER AFFAIRS, FOOD AND PUBLIC DISTRIBUTION

#### (DEPARTMENT OF CONSUMER AFFAIRS)

#### ORDER

New Delhi, the 27th December, 2017

**S.O.4079(E).**—In exercise of the powers conferred by section 3 of the Essential Commodities Act, 1955 (10 of 1955), the Central Government hereby makes the following order further to amend the Removal of Licensing Requirements, Stock Limits and Movement Restrictions on Specified Foodstuff Order, 2016. namely:--

- 1. Short title and commencement .--** This Order may be called the Removal of Licensing Requirements, Stock Limits and Movement Restrictions on Specified Foodstuffs (Seventh Amendment) Order, 2017.
- 2.** In the Removal of Licensing Requirements, Stock Limits and Movement Restrictions on Specified Foodstuffs Order, 2016, in clause 3, in sub-clause (2), in item (iv), for the figures, letters and word “31<sup>st</sup> December, 2017” the figures, letters and words “31<sup>st</sup> March, 2018” shall be substituted.

[F. No. S-10/3/2017-ECR&E]

A. K.CHODHARY, Economic Adviser.

Note : The principal order was published in the Gazette of India, Extraordinary, Part II, Section 3, Sub-section (i), vide numbers S.O., 3341(E), dated the 29<sup>th</sup> September, 2016 and was subsequently amended vide numbers S.O. 3341(E) dated the 27<sup>th</sup> October, 2016. S.O. 1288(E), dated the S.O. 3136(E), dated the 27<sup>th</sup> September, 2017, S.O. 3397(E), dated the 23<sup>rd</sup> October, 2017 and S.O. 3422(E), dated the 25<sup>th</sup> October, 2017.

By order and in the name of the Governor of Gujarat,

**M. Z. SHROFF,**

Under Secretary to Government.

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# The Gujarat Government Gazette

## EXTRAORDINARY

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### PART IV-A

Rules and Orders (Other than those published in Parts I, I-A, and I-L) made  
by the Government of Gujarat under the Central Acts

#### FINANCE DEPARTMENT, NOTIFICATION

Sachivalaya, Gandhinagar, 5<sup>th</sup> February, 2018.

#### PRIZE CHITS AND MONEY CIRCULATION SCHEMES (BANNING) (GUJARAT) RULES, 2017.

**No.(GHN-24) MIS-102017-O-1033-N dated 5-2-2018 :-** In pursuance of the provision of rule 2(b) and rule 2(g) of the Prize Chits and Money Circulation Schemes (Banning) (Gujarat) Rules, 2017, the Government of Gujarat hereby appoints **the Secretary (Expenditure), Finance Department, Sachivalaya, Gandhinagar** as a “Competent Authority” and **Superintendent of Police, Prevention of Economic Offences Branch, Economic Offences Wing, CID Crime and Railways, Gujarat State, Gandhinagar** as “Nodal Police Authority” respectively to carrying out the purposes of the Prize Chits and Money Circulation Schemes (Banning) (Gujarat) Rules, 2017.

By Order and in the name of the Governor of Gujarat,

**SANJEEV KUMAR,**  
Secretary to Government.

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# The Gujarat Government Gazette

## EXTRAORDINARY

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### PART IV-A

Rules and Orders (Other than those published in Parts I, I-A, and I-L) made  
by the Government of Gujarat under the Central Acts

#### HOME DEPARTMENT

#### Notification

Sachivalaya, Gandhinagar, 31<sup>st</sup> January, 2018.

**No.GG/04/ARM/182017/731497/M.-** In pursuance of the provisions contained against serial no.4 in schedule-II of the Arms Rules-2016, the Government of Gujarat hereby notify that the Home Department's Notification No-GG/79/AAR-3088-GOI-17-M, dated: 19/09/1989, empowering all Sub Divisional Magistrates for issuance of licence specified there in, shall continue to be in vogue, even after implementation of Arms Rules-2016.

2. In continuation of the provision of the above cited para, and in consonance with the provisions of sub-section (6) of section-17 of the Arms Act - 1959, the Government also notify that the District Magistrates shall be Appellate Authorities for the purpose of appeals against the orders passed by Sub Divisional Magistrates under the provisions contained in the above cited para.

By order and in the name of the Governor of Gujarat,

**K. D. SUTHAR,**  
Joint Secretary to Government.

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## EXTRAORDINARY

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### PART IV-A

Rules and Orders (Other than those published in Parts I, I-A, and I-L) made  
by the Government of Gujarat under the Central Acts

#### HOME DEPARTMENT

#### Notification

Sachivalaya, Gandhinagar, 29<sup>th</sup> January, 2018.

#### The Prisons Act (IX of 1894)

**No.:GG/3/2018/JLK/172007/185/J.:-** In Exercise of the powers conferred under subsection (1) of the section-3 of the Prisons Act (IX of 1894) and section 266(B)(1) of Criminal Procedure Code, 1973, Government of Gujarat declares the hitherto newly constructed Prison at Junagadh as a **Junagadh Open Jail**. The jail will function in its new status of a "**Junagadh Open Jail**" with effect from the date of issue of this notification.

By order and in the name of the Governor of Gujarat,

**MAHENDRA R. SONI,**  
Deputy Secretary to Government.

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# The Gujarat Government Gazette

## EXTRAORDINARY

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### PART IV-A

Rules and Orders (Other than those published in Parts I, I-A, and I-L) made  
by the Government of Gujarat under the Central Acts

### SOCIAL JUSTICE AND EMPOWERMENT DEPARTMENT

#### NOTIFICATION

Sachivalaya, Gandhinagar, 8<sup>th</sup> February, 2018.

#### Rights of Persons with Disabilities Act, 2016

**NO.GH/SH/2/APG-102017-88013-CHH.1:-** The following draft of rules which is proposed to be issued under sub section (2) of section 101 of the Rights of Persons with Disabilities Act, 2016 (49 of 2016), is published as required by sub-section (1) of the section 101 of the said Act, for the information of all persons likely to be affected thereby and notice is hereby given that the said draft of rules will be taken into consideration by the Government of Gujarat on or after the expiry of thirty days from the date of its publication in the *official Gazette*

2. Any objection or suggestion which may be received by the Principal Secretary to the Government of Gujarat, Social Justice and Empowerment Department, Sachivalaya, Gandhinagar, from any person with respect to the said draft on or before the expiry of the aforesaid period will be considered by the Government.

#### Draft Notification

#### Rights of Persons with Disabilities Act, 2016

**No.GH/SH/.../APG-102017-88013-CHH.1:-** In exercise of the powers conferred by sub-section (2) of section 101 of the Rights of Persons with Disabilities Act, 2016 (49 of 2016), and in supersession of the rules made in this behalf, the Government of Gujarat hereby makes the following rules, namely :-

#### CHAPTER-I

##### Preliminary

1. Short title and Commencement. - (1) These rules may be called the Gujarat Rights of Persons with Disabilities Rules, 2018.

(2) They shall come into force on the date of their final publication in the *Official Gazette*.

2. Definitions.- (1) In these rules, unless the context otherwise requires,-

- (a) "Act" means the Rights of Persons with Disabilities Act, 2016 (49 of 2016);
  - (b) "Certificate" means a certificate of disability issued by a certifying authority referred to in sub-section (1) of section 57 of the Act;
  - (c) "Certificate of registration" means a certificate of registration issued by the Competent Authority under section 50 of the Act;
  - (d) "Form" means a form appended to these rules.
- (2) Words and expressions used herein and not defined but defined in the Act shall have the meanings respectively assigned to them in the Act.

## CHAPTER II

### Committee on Research on Disability

3. State Committee for Research on Disability.- (1) The Committee for Research on Disability at the State level shall consist of the following members, namely:-

- (i) An eminent person having vast experience in the field of science and medical research to be nominated by the State Government, *ex-officio*-Chairperson
  - (ii) Director of Medical Services of the Gujarat Government, *ex-officio*- Member;
  - (iii) Five members to be nominated by the State Government as representatives from the registered organization in the Gujarat state representing each of the five groups of specified disabilities in the Schedule of the Act- Members  
Provided that at least one representative of the registered organizations shall be a woman
  - (iv) Director Social Defense, Government of Gujarat Member Secretary;
- (2) The Chairperson may invite any expert as a special invitee
- (3) The term of office of the nominated members shall be for a period of three years from the date on which they enter into office but the nominated members shall be eligible for re-nomination for one more term.
- (4) One -half of the members shall constitute the quorum of the meeting.
- (5) The non-official members and special invitees shall be entitled for travelling allowance and dearness allowance as admissible to a Class I officer of the State Government.
- (6) The State Government of Gujarat may provide the Committee with such clerical and other staff as the Government considers necessary.

4. Person with disability not to be a subject of research.- No person with disability shall be considered to be a subject of research except when the research involves physical impact on him.

## CHAPTER-III

### Limited Guardianship

5. Limited Guardianship.- (1) A District Court or any designated authority as designated by the State Government on its own or otherwise shall grant the support of limited guardianship to a person with disability to take a legally binding decision on his behalf.

- (2) The District Court or the designated authority before granting limited guardianship for the person with disability shall satisfy itself that such person is not in a position to take legally binding decision of his own.
- (3) The District Court or the designated authority shall take a decision preferably within a period of one month from the date of receipt of an application regarding grant of limited guardianship or from the date of coming to his notice of the need of such limited guardianship:

Provided that the consent of the person to act as a limited guardian shall also be obtained before grant of such limited guardianship.

- (4) The validity of the limited guardianship as appointed under sub-rule (1) shall be initially for a period of five years which can be further extended by the District Court or the designated authority as the case may be:

Provided that the District Court or the designated authority shall follow the same procedure while extending the validity of the limited guardianship as followed while granting the initial guardianship.

- (5) While granting the support of such limited guardianship the District Court or the designated authority shall consider a suitable person to be appointed as a limited guardianship in the following preference of merit:-
  - (a) The parents or adult children of the person with disability,
  - (b) Immediate brother or sister,
  - (c) Other Blood relatives or care givers or prominent personality of the locality.
- (6) Only those individuals who are over the age of 18 years and who have not been previously convicted of any cognizable offence as defined in the Code of Criminal Procedure, 1973 (1 of 1974) shall be appointed as limited guardian.
- (7) The limited guardian appointed under sub-rule (1) shall consult the person with disability in all matters before taking any legally binding decisions on his behalf.
- (8) The appointed limited guardian shall ensure that the legally binding decisions taken on behalf of the person with disability are in the interest of the person with disability.

#### CHAPTER IV

##### Education

6. Terms and conditions before recognition of the educational institution.- While determining the terms and conditions of Educational Institutions for recognition, the Director of Primary Education in the Gujarat state shall ensure that all the requirements as provided in section 16 of the Act have been fulfilled.

#### CHAPTER V

##### Certificate of Registration of Institutions

7. Application for, and grant of Certificate of registration.- (1) A person desirous of establishing or maintaining an institution for persons with disabilities may make an application in FORM A to the Director, Social Defense, the competent authority referred to in Section 51 of the Act.
  - (2) Every application made under sub-rule (1) shall be accompanied with,-



- (a) documentary evidence of work in the area of disability;
  - (b) the Constitution or bye-laws or regulations governing the institution;
  - (c) audited statement and details of grants received in the last three years, preceding the date of application;
  - (d) a statement regarding total number of persons employed in the Institution along with their respective duties;
  - (e) the number of professionals employed in the Institution;
  - (f) a statement regarding qualifications of the professionals employed by the Institution; and
  - (g) the proof of residence of the applicant.
- (3) Every application made under sub-rule (1) shall comply with the following requirements in respect of the concerned institution, namely:-
- (a) that the institution had been eligible for working in the field of rehabilitation of persons with disabilities.
  - (b) that the institution is registered under the Indian Societies Registration Act, 1860 (XXI of 1860) or as a Public Charitable Trust under Gujarat Public Trust Act, 1950 or Not-for-Profit Company under Section 8 of the Indian Companies Act, 2013 and a copy of such registration certificate along with the bye-laws and memorandum of association of the society and/or Trust or a Non-for-Profit company shall furnish with the application;
  - (c) that the institution has not been running to profit any individual or a body of individuals;
  - (d) that the institution has employed professionals registered with the Rehabilitation Council of India to cater to the special needs of children with disabilities;
  - (e) that the institution has adequate teaching and learning material for the persons with disabilities; and
  - (f) that the institution has submitted its audited accounts and annual reports
- (4) The Certificate of registration under this rule, unless revoked under section 52 of the Act, shall remain in force for a period of five years on and from the date on which it is granted or renewed.
- (5) An application for the renewal of certificate of registration shall, be made in the same manner as the application for grant of certificate under sub-rule (1) accompanied with the previous certificate of registration and a statement that the applicant is applying for renewal of the certificate so accompanied:

Provided that such application shall be made before sixty days of the expiry of the validity of such certificate:

Provided further that the Director of Social Defense may consider application for renewal of the Certificate of registration after 60 days but not later than 120 days, if he is satisfied that sufficient reasons has been provided for such delay.

- (6) If the application for renewal of Certificate of registration is made before its expiry as specified in the proviso to sub-rule (5), the certificate of registration shall continue to be in force until orders are passed on the application and the certificate of registration shall be deemed to have expired if application for its renewal is not made within sixty days as specified in the said proviso.

- (7) Every application made under sub-rule (1) or sub rule (5), in which the competent authority referred to in sub-section (1) of section 51 of the Act, is satisfied that the requirements for grant of certificate of registration under the Act and these rules have been complied with, shall be disposed of by it within a period of ninety days thereafter.
8. Appeal against the order of Competent Authority. - Any person aggrieved by the order of the Director of Social Defense referred to in sub-section (1) of section 51 of the Act, refusing to grant a certificate of registration or revoking a certificate of registration may, within three months from the date of the order, prefer an appeal against that order to Secretary to Government, Social Justice and Empowerment Department, appellate authority referred to in sub-section (1) of section 53 and the appellate authority may, after such enquiry into the matter as it considers necessary and after giving Director of Social Defense, the appellant an opportunity of hearings, make such order as it thinks fit.

## CHAPTER VI

### Appeal Regarding Certificate of Disability

9. Appeal against the decision of the authority issuing certificate of disability.-
- (1) Any person aggrieved with the decision of the authority issuing the certificate of disability may within ninety days from the date of the decision, prefer an appeal to the Commissioner, Health, Medical Services and Medical Education and Research, Government of Gujarat, appellate authority designated by the State Government for the purpose under sub- section (1) of section 59 of the Act in the following manner:-
- (a) The appeal shall contain brief background and the grounds for making the appeal.
- (b) The appeal shall be accompanied by a copy of the certificate of disability or letter of rejection issued by the certifying authority:
- Provided that where a person with disability is a minor or suffering from any disability which renders him unfit to make such an appeal himself, the appeal on his behalf may be made by his legal or limited guardian as the case may be.
- (2) On receipt of such appeal, Commissioner, Health, Medical Services and Medical Education and Research, Government of Gujarat, the appellate authority shall provide the appellant an opportunity to present his case and thereafter pass such reasoned and detailed order as it may deem appropriate.
- (3) Every appeal preferred under sub-rule (1) shall be decided as expeditiously as possible and not later than a period of sixty days from the date of receipt of the appeal.

## CHAPTER VII

### State Advisory Board

10. Allowances for the Members of the Gujarat State Advisory Board.- (1) The non-official Members of the Gujarat State Advisory Board on disability not residing in the State capital region, shall be paid an allowance of rupees two thousand per day for each day of the actual meetings of the said Board.
- (2) The non-official Members of the Gujarat State Advisory Board on disability residing outside Gandhinagar shall be paid daily and travelling allowances for each day of the actual meetings of the said Board at the rates admissible to a Class I Officer of the Government of Gujarat.
11. Board Meeting.- (1) The meetings of the Gujarat State Advisory Board on disability constituted under sub-section (1) of section 66 of the Act (hereinafter in this Chapter

referred to as 'the Board') shall ordinarily be held in Gandhinagar, the Capital of Gujarat on such dates as may be fixed by its Chairperson:

Provided that it shall meet at least once in every six months.

- (2) The Chairperson of the Board shall, upon the written request of not less than ten members of the Board, call a special meeting of the Board.
  - (3) Fifteen clear days' notice of an ordinary meeting and five clear days' notice of a special meeting specifying the time and the place at which such meeting to be held and the business to be transacted thereat, shall be given by Member-Secretary of the Board to the members of the Board.
  - (4) Notice of a meeting may be given to the members of the Board by delivering the same to them by messenger or sending it by registered post to their respective last known places of residence or business or by email or in such other manner as the Chairperson of the Board may, in the circumstances of the case, thinks fit.
  - (5) No member of the Board shall be entitled to bring forward for the consideration of the meeting any matter of which he has not given ten clear days' notice to the Member Secretary of the Board, unless the Chairperson of the Board, in his discretion, permit him to do so.
  - (6) The Board may adjourn its meeting from day to day or to any particular day as under: -
    - (a) Where a meeting of the Board is adjourned from day to day, notice of such adjourned meeting shall be given, to the members of the Board available at the place where the meeting which was adjourned was to be held and it shall not be necessary to give notice of the adjourned meeting to the rest of the members;
    - (b) Where a meeting of the Board is adjourned not from day to day but from the day on which the meeting is to be held to another date, notice of such meeting shall be given to all the members of the Board in the manner as specified in sub-rule (4) above.
12. Presiding officer- The Chairperson of the Board shall preside at every meeting of the Board and in his absence, the Vice-Chairperson thereof shall preside, but when both the Chairperson and the Vice-Chairperson of the Board are absent from any meeting, the members of the Board present shall elect one of the members to preside at that meeting.
13. Quorum.- (1) One-third of the total members of the Board shall form the quorum for any meeting.
- (2) If at any time fixed for any meeting or during the course of any meeting less than one-third of the total members of the Board are present, the Chairperson thereof may adjourn the meeting to such hours on the following or on some other future date as he may fix.
  - (3) No quorum shall be necessary for the adjourned meeting of the Board.
  - (4) No matter which had not been on the agenda of the ordinary or the special meeting of the Board, as the case may be, shall be discussed at its adjourned meeting.
  - (5) (a) Where a meeting of the Board is adjourned as specified in sub-rule (2) above for want of quorum to the following day, notice of such adjourned meeting shall be given to the members of the Board available at the place where the meeting which was adjourned was to be held and it shall not be necessary to give notice of the adjourned meeting to other members; and  
(b) Where a meeting of the Board is adjourned under sub-rule (2) for want of quorum not to the following, but on a date with sufficient gap, notice of such adjourned meeting shall be given to all the members of the Board in the manner as specified in sub-rule (4) of rule 11.

14. Minutes.- (1) Record shall be kept of the names of all the members of the Board who attended the meeting of the Board and of the proceedings at the meetings in a book to be maintained for that purpose by the Member- Secretary of the Board.
  - (2) The minutes of the previous meeting of the Board shall be read at the beginning of every succeeding meeting, and shall be confirmed and signed by the presiding officer at such meeting.
  - (3) The proceedings shall be open to inspection by any member of the Board at the office of the Member-Secretary of the Board during office hours.
15. Business to be transacted at meeting.- Except with the permission of the Presiding officer, no business which is not entered in the agenda or of which notice has not been given by a member under sub-rule (5) of rule-11 shall be transacted at any meeting of the Board.
16. Agenda for the meeting of the Gujarat State Advisory Board.- At any meeting of the Board business shall be transacted in the order in which it is entered in the agenda, unless otherwise resolved in the meeting with the permission of the presiding officer:
 

Provided that either at the beginning of the meeting of the Board or after the conclusion of the debate on a motion during the meeting, the presiding officer or a member of the Board may suggest a change in the order of business as entered in the agenda and if the Chairperson of the Board agrees, such a change shall take place.
17. Decision by majority.- All questions considered at a meeting of the Board shall be decided by a majority of votes of the members of the Board present and voting and in the event of equality of votes, the Chairperson of the Board, or in the absence of the Chairperson, the Vice-Chairperson of the Board or in the absence of both the Member presiding at the meeting, as the case may be, shall have a second or casting vote.
18. No proceedings to be invalid due to vacancy or any defect.- No proceedings of the Board shall be invalid by reasons of existence of any vacancy in or any defect in the constitution of the Board.
19. District - Level Committee.- The District-Level Committee on disability referred to in Section 72 of the Act shall consist of-
  - (i) Collector and District Magistrate of the district as *ex-officio* Chairperson
  - (ii) Municipal Commissioner.....Member
  - (iii) District Development Officer.....Member
  - (iv) Civil Surgeon..... Member
  - (v) Chief District Medical Officer..... Member
  - (vi) District Education Officer.....Member
  - (vii) District Primary Education Officer.....Member
  - (viii) Director, District Rural Development Agency.....Member
  - (ix) District Employment Officer.....Member
  - (x) Executive Engineer (Road and Building)..... Member
  - (xi) A Representative of a Registered Organization under the Act and Person with disability as defined in clauses) of section 2 of the Act (Five members) .....Member
  - (xii) Any other member as invited by the Chairperson.....Member
  - (xiii) District Social Defense Officer.....Member Secretary.

20. Committee.- The District-Level Committee on disability shall perform the following functions, namely:-
- (a) advise the District Authorities on matters relating to rehabilitation and empowerment of persons with disabilities;
  - (b) monitor the implementation of the provisions of the Act and the rules made there under by the District Authorities;
  - (c) assist the District Authorities in implementation of schemes and programmes of the Government, for empowerment of persons with disabilities;
  - (d) look into the complaints relating to non-implementation of the provisions of the Act by the District Authorities and recommend suitable remedial measures to the concerned authority to redress such complaints.
  - (e) look into the appeal made by the employees of Gujarat Government establishments aggrieved with the action taken by the District level establishments under sub-section (4) of Section 23 of the Act and recommend appropriate measures.
  - (f) any other functions as may be assigned by the State Government.

### CHAPTER VIII

#### Gujarat State Commissioner for Persons with Disabilities

21. Qualification for appointment of the State Commissioner.- A person shall not be qualified to be appointed as a Gujarat State Commissioner for Persons with Disability under sub-section (1) of section 79 of the Act (in this Chapter referred to as "the State Commissioner") unless,-
- (i) he has special knowledge or practical experience in respect of the matters relating to rehabilitation of persons with disabilities;
  - (ii) he has not attained the age of sixty years on the 1<sup>st</sup> January of the year in which the last date for receipt of applications, as specified in the advertisement inviting applications for appointment of the State Commissioner, occurs;
  - (iii) he possesses the following educational qualifications and experience, namely:-
- (A) Educational qualifications:
    - (i) essential: Graduate from a recognized university;
    - (ii) desirable: recognised degree or diploma in social work or law or management or human rights or rehabilitation or education of disabled persons.
  - (B) Experience: atleast 20 years experience in a Group 'A' level or equivalent post:-
    - (i) in Central or State Government, or
    - (ii) Public Sector Undertakings or Semi Government or Autonomous Bodies dealing with disability related matters or social sector, or
    - (iii) works in the capacity of a senior level functionary in a registered State or national or international level voluntary organization working in the field of disability or social development :

Provided that out of the total twenty years experience mentioned in this sub-clause, at least three years of experience in the recent past have been in the field of empowerment of persons with disabilities.
22. Mode of appointment of the State Commissioner.- (1) At least six months before the post of the State Commissioner is due to fall vacant, an advertisement shall be published in at least two national or state level daily newspapers, one in English and the other in the vernacular

language inviting applications for the post from eligible candidates fulfilling the criteria mentioned in rule 20.

- (2) A Search-cum-Selection Committee shall be constituted by Government of Gujarat to recommend to it a panel of three suitable candidates for the post of the State Commissioner.
  - (3) Composition of the Search-cum-Selection Committee referred to in sub-rule (2) shall be governed by relevant instructions issued by the concerned administrative department of the Government of Gujarat.
  - (4) The panel recommended by the Search-cum-Selection Committee under sub-rule (2) may consist of persons from amongst those who have applied in response to the advertisement made under sub-rule (1) as well as from other willing eligible persons in the employment of the Central or the State Government whom the Committee may consider suitable.
  - (5) The State Government shall appoint one of the candidates out of the panel recommended by the Search-cum-Selection Committee under sub-rule (2) as the State Commissioner.
23. Term of the State Commissioner.- (1) The State Commissioner shall be appointed on full-time basis for a period of three years from the date on which he assumes office, or till, he attains the age of sixty-five years, whichever is earlier.
- (2) A person may serve as the State Commissioner for a maximum of two terms, subject to the upper age limit of sixty-five years.
24. Salary and allowances of the State Commissioner.- (1) The salary and allowances of the State Commissioner shall be the salary and allowances as admissible to a Secretary to the State Government.
- (2) Where a State Commissioner, being a retired government servant or a retired employee of any institution or autonomous body funded by the Central or State Government, is in receipt of pension in respect of such previous service, the salary admissible to him under these rules shall be reduced by the amount of the pension, and if he had received in lieu of a portion of the pension, the commuted value thereof, by the amount of such commuted portion of the pension.
25. Other terms and conditions of service of the State Commissioner.- The other terms and conditions of service of State Commissioner shall be such as specified below, namely:-
- (a) Leave: The State Commissioner shall be entitled to such leave as is admissible to Class I officer under the relevant provisions of the Gujarat Civil Services (Leave) Rules, 2002 applicable on them.
  - (b) Leave Travel Concession: The State Commissioner shall be entitled to such Leave Travel Concession as is admissible to Class I officer under the relevant provisions of the State Government Resolutions applicable on them.
  - (c) Medical Benefits: The Gujarat State Commissioner shall be entitled to such medical benefits as is admissible to Class I officers under the relevant provisions of the State Government Resolutions applicable on them.
26. Resignation and removal- (1) The State Commissioner may, by notice in writing, under his hand, addressed to the State Government, resign from his post.
- (2) The State Government shall remove the State Commissioner from his office, if he -
    - (a) becomes an undischarged insolvent; or

- (b) engages himself during his terms of office in any paid employment or activity outside the duties of his office; or
- (c) is convicted and sentenced to imprisonment for an offence which in the opinion of State Government involves moral turpitude; or
- (d) is in the opinion of the State Government, unfit to continue in office by reason of infirmity of mind or body or serious default in the performance of his functions as laid down in the Act; or
- (e) without obtaining leave of absence from the State Government, remains absent from duty for a consecutive period of fifteen days or more; or
- (f) has, in the opinion of the State Government, so abused the position of the State Commissioner as to render his continuance in the office detrimental to the interest of persons with disability:

Provided that no State Commissioner shall be removed from office under this rule except after following the procedure, *mutatismutandis*, applicable for removal of a Class 1 officer of the State Government.

- (3) The State Government of Gujarat may suspend the State Commissioner, in respect of whom proceedings for removal have been commenced in accordance with sub-rule (2), pending conclusion of such proceedings.

27. Residuary provision.- The other conditions of service of the State Commissioner, in respect of which no express provision has been made in these rules, shall be determined by the rules and orders for the time being applicable to the Secretary to the State Government.

28. Constitution of the Advisory Committee.- (1) The State Government shall appoint an Gujarat State Advisory Committee to assist the State Commissioner comprising the following members, namely:-

- (a) three experts to represent each of the five groups of specified disabilities mentioned in the Schedule to the Act by rotation, of whom one shall be woman;
  - (b) two experts or senior officers of the State Government to be nominated by the State Government.
- (2) The tenure of the members of the Gujarat State Advisory Committee shall be for a period of three years.
- (3) The State Commissioner may invite subject or domain expert as per the need who shall assist him in meeting or hearing and in preparation of the report.

29. Procedure to be followed by State Commissioner.- (1) A complainant may present a complaint containing the following particulars in person or by his agent to the State Commissioner or send it by registered post or by email addressed to the State Commissioner, namely:-

- (a) the name, description and the address of the complainant;
  - (b) the name, description and the address of the opposite party or parties, as the case may be, so far as they may be ascertained;
  - (c) the facts relating to complaint and when and where it arose;
  - (d) documents in support of the allegations contained in the complaint;
  - (e) the relief which the complainant claims.
- (2) The State Commissioner on receipt of a complaint shall refer a copy of the complaint to the opposite party or parties mentioned in the complaint directing him to give his

version of the case within a period of thirty days or such extended period not exceeding fifteen days as may be granted by the State Commissioner.

- (3) On the date of hearing or any other date to which hearing could be adjourned, the parties or their agents shall appear before the State Commissioner.
- (4) Where the complainant or his agent fails to appear before the State Commissioner on such days, the Gujarat State Commissioner may either dismiss the complaint on default or decide on merits.
- (5) Where the Opposite party or his agent fails to appear on the date of hearing, the Gujarat State Commissioner may take such necessary action under section 82 of the Act as he deems fit for summoning and enforcing the attendance of the opposite party.
- (6) The State Commissioner may dispose of the complaint *ex-parte*, if necessary.
- (7) The State Commissioner may on such terms as he deems fit and at any stage of the proceedings, adjourn the hearing of the complaint.
- (8) The State Commissioner shall decide the complaint as far as possible within a period of three months from the date of receipt of notice by the opposite party.

30. Advisory Committee to assist the State Commissioner.- (1) The State Government shall appoint an Advisory Committee comprising five experts to represent each of the five groups of specified disabilities mentioned in the Schedule to the Act, of whom two shall be women;

- (2) The State Commissioner may invite subject or domain expert as per the need who shall assist him in meeting or hearing and in preparation of the report.
- (3) The tenure of the members of the Advisory Committee shall be for a period of three years and the members shall not be eligible for re-nomination.
- (4) The non-official members of the Advisory Committee, residing in the State capital, shall be paid an allowance of rupees two thousand per day for each day of the actual meeting.
- (5) Non-official members of the Advisory Committee, not residing in Gandhinagar shall be paid daily and travelling allowances for each day of the actual meetings at the rate admissible to a Class I officer of the State Government.

31. Submission of annual reports.- (1) The State Commissioner shall as soon as may be possible after the end of the financial year, but not later than the 30th day of September in the next year ensuing, prepare and submit to the State Government an annual report giving a complete account of his activities during the said financial year in accordance with section 83(3) of the Act.

- (2) In particular, the annual report referred to in sub-rule (1) shall be in the form so that the details of separate matters be provided under separate heads *inter-alia* containing therein information in respect of each of the following matters, namely:-
  - (a) names of officers and employees in the office of the State Commissioner and a chart showing the organisational set up;
  - (b) the functions which the State Commissioner has been empowered under the Act and the highlights of the performance in this regard;
  - (c) the main recommendations made by the State Commissioner;
  - (d) progress made in the implementation of the Act in the State; and
  - (e) any other matter deemed appropriate for inclusion by the State Commissioner or specified by the State Government from time to time to be included in the report.



## CHAPTER IX

## Gujarat State Fund for Persons with Disabilities

## 31. Gujarat State Fund for Persons with Disabilities and its management.-

(1) There shall be constituted a State Fund for persons with disabilities hereinafter referred to as "the Gujarat State Fund" in the following manners, namely:-

- (a) all sums received by way of grant, gifts, donations, benefactions, bequests, contributions under Corporate Social Responsibility or transfers;
- (b) all sums received from the State Government including grants- in-aid; and
- (c) all sums from such other sources as may be decided by the State Government.

(2) There shall be a governing body consisting of following members to manage the Gujarat State Fund, namely:-

- (a) Principal Secretary or Secretary, Social Justice and Empowerment Department, Government of Gujarat -Chairperson;
- (b) two representatives from the Health and Family Welfare Department, Education Department, Labour and Employment Department, Finance Department, Panchayat, Rural Housing and Rural Development Department in Government of Gujarat, not below the rank of a Deputy Secretary, by rotation in alphabetical orders - Members ;
- (c) two persons representing different types of disabilities to be nominated by the State Government of, by rotation -Members;
- (d) Director, Social Defense, Government of Gujarat - Convener and Chief Executive Officer.

(3) The governing body shall meet as often as necessary, but at least once in every financial year.

(4) The nominated members shall hold office for not more than three years.

(5) No member of the governing body shall be a beneficiary of the Fund during the period such Member holds office.

(6) The nominated non-official members shall be eligible for payment of travelling allowance and dearness allowance as admissible to a Class I officer of the State Government for attending the meetings of the governing body.

(7) No person shall be nominated under clause (b) and (c) of sub-rule (2) as a member of the governing body, if he -

- (a) is, or has been, convicted of an offence, which in the opinion of the State Government, involves moral turpitude; or
- (b) is, or at any time has been, adjudicated as an insolvent.

33. Utilisation of the Gujarat State Fund.- (1) The State Fund shall be utilized for the following purposes, namely:-

- (a) financial assistance in the areas which are not specifically covered under any scheme and programme of the State Government;
- (b) administrative and other expenses of the Fund, as may be required to be incurred by or under the Act; and
- (c) such other purposes as may be decided by the governing body.

(2) Every proposal of expenditure shall be placed before the governing body for its approval.

- (3) The governing body may appoint secretarial staff including accountants with such terms and conditions as it may think appropriate to look after the management and utilisation of Gujarat State Fund based on need based requirement.
- (4) The Gujarat State Fund shall be invested in such manner as may be decided by the governing body.
- (5) The accounts of the Gujarat state Fund shall be audited by the Comptroller and Auditor General of India as Specified in Section 88 of the Act.
34. Budget.- The Chief Executive Officer of the Gujarat State Fund shall prepare the budget for incurring expenditure under the State Fund in each financial year showing the estimated receipt and expenditure of the Fund, in January every year and shall place the same for consideration of the governing body.
35. Annual Report.- The annual report of the Social Justice and Empowerment Department, Government of Gujarat shall include a chapter on Gujarat State Fund.

### FORM- A

*[See rule 7(1)]*

#### Application for a Certificate of Registration

- (1) Name of applicant and his address:.....
- (2) Institution in respect of which application is made;
  - a. Name: .....
  - b. Address (Office/Project) : .....
  - c. Phone /Fax/Telex/(Office) : .....  
(Project)
- (3) (i) Name of the Act under which the institution is already registered :....  
(ii) Registration No. and date of registration: .....  
(Please attach a photocopy)
- (4) Memorandum of Association and Bye-laws of the institution: .....  
(Please attach a photocopy)
- (5) Name, address, occupation and other particulars of the members of the Board of Management/Governing Body of the institution:.....
- (6) Present Activities of the institution:.....
- (7) Present membership strength and categorisation of the institution.....  
List of documents to be attached:
  - (a) A copy of the annual report for the previous year,
  - (i) Audited Statement of account duly certified by Chartered Accountant Receipt and Payment Account (by Chartered Accountant for the last two years)
  - (ii) Income and Expenditure Account (by Chartered Accountant for the last two years)  
Balance sheet for the last two years (by Chartered Accountant for the last two years)

- (b) Details of staff employed by the institution and their qualification: ...
- (c) Details of beneficiaries to be covered by the..... of the institution
- (d) If hostel is maintained, then number of hostellers.....
- (e) Other terms, if any.
- (f) Whether the institution is located on its own/Rented building (Necessary evidence to be attached) .....

Signature of the Applicant

Name :

Designation :

Address :

Date :

Office Stamp :

By order and in the name of the Governor of Gujarat,

**J. V. DESAI,**

Deputy Secretary to Government.

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# The Gujarat Government Gazette

**EXTRAORDINARY**  
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Separate paging is given to this Part in order that it may be filed as a Separate Compilation.

## PART IV-A

**Rules and Orders (Other than those published in Parts I, I-A, and I-L) made  
by the Government of Gujarat under the Central Acts**

### WOMEN AND CHILD DEVELOPMENT DEPARTMENT

#### Notification

Sachivalaya, Gandhinagar, 12<sup>th</sup> February, 2018.

#### National Food Security Act, 2013.

**GS-09-2018-ICD-112016-GOI-132-B :-** In exercise of the powers conferred by clauses (c), (d) and (e) of sub-section (2) of section 40 read with section 15 of the National Food Security Act, 2013 (20 of 2013), the Government of Gujarat hereby makes the following rules, namely :-

#### 1. Short title and commencement:

- (1) These rules may be called the Gujarat Procedure for Redressal of Grievances (For Services Pertaining to ICDS) Rules, 2018.
- (2) They shall come into force on the date of their publication in the *Official Gazette*.

#### 2. Definitions (1) In these rules, unless the context otherwise requires,-

- (a) "Act" means the National Food Security Act, 2013 (20 of 2013);
- (b) "Anganwadi Center" means Anganwadi Center established under the Integrated Child Development Services (ICDS) Scheme and as defined under section 2(1) of the Act;
- (c) "Meal" means meal as defined under section 2 (9) of the Act;
- (d) "District Grievance Redressal Officer" means an Officer appointed or designated under section 15 of the Act;
- (e) "Beneficiaries" means beneficiaries registered as a local Anganwadi Center wanted to avail the benefits of the Scheme falling within the purview of section 4(a), section 4 (b), section 5 (1) (a), and section 5 (2) of the Act and as per guidelines issued or schemes framed by the Central Government from time to time;
- (f) "Form" means form appended to these rules;
- (g) "Government" means the Government of Gujarat;

- (h) "Nodal Officer" means an officer designated or appointed as such by the State Government under section 14 of the Act;
- (i) "Section" means section of the Act.
- (2) Words and expressions used in these rules but not defined, shall have the same meaning as respectively assigned to them in the Act;

### **3. Qualifications of District Grievance Redressal Officer and Nodal Officer,**

- (1) The Officer not below the rank of Class I under the District Panchayat nominated by the District Development Officer (DDO) of the respective district shall be District Grievance Redressal Officer designated by the State Government for the purpose of any grievances pertaining to ICDS service provided through Anganwadi Centers across the State.
- (2) The State Government shall designate Child development Project Officer of respective Block under ICDS as a Nodal Officer.

### **4. Publication of names of District Grievance Redressal Officers and Nodal Officers.-**

The District Development Officer of each district shall ensure to publish, for the convenience of the beneficiaries of the ICDS Scheme,

- (i) names and addressed of District Grievance Redressal Officers and Nodal officers for ICDS at each Anganwadi Center along with the address of the office, phone number, fax number;
- (ii) Details of Grievance Redressal Office for ICDS outside the office of the District Development Officer;
- (iii) Officer of the District Panchayat Office / Taluka Panchayat Office where Programme Officer under ICDS / Supervisor / Child Development Project Officer under ICDS has their base office; and
- (iv) it shall also be displayed on the website of each District Collector, Transparency portal of Director, Food and Civil Supplies and website of Women and Child Development Department.

### **5. Help lines. –**

- (1) Help lines Consisting toll free telephone numbers, online complaint filing mechanism shall be set up by the Commissionerate of Women and Child Development for receiving complaints from beneficiaries of the ICDS Scheme.
- (2) The time of operation of services of such help lines shall be published widely.

### **6. Relaxation of fee. -** No fee shall be levied for application to District Grievance Redressal Officers and Appeal Authority.

### **7. Manner of receiving complaint.-**

- (1) In case the beneficiaries of the ICDS Scheme, in matters relating to ICDS services as per the Act and matters related thereto, then the aggrieved beneficiary shall file a written complaint in **Form A** through hand delivery, fax, e-mail, online complaint, post or registered post with the concerned District Grievance Redressal Officer appointed or designated by the Government under subsection (1) of section 15 of the Act.
- (2) No anonymous complaint shall be entertained.
- (3) The District Grievance Redressal Officer shall upon receipt of the written complaint give due acknowledgement to the complainant in **Form B** within three working days from the date of receiving of complaint.

**8. Manner of giving notice.-**

- (1) The District Grievance Redressal Officer shall issue the notice for hearing to the Anganwadi Worker along with the Supervisor of respective Block involved in providing ICDS services under the Act and to the particular beneficiary within seven working days from the date of receiving complaint.
- (2) Intimation of hearing the complaint by the District Grievance Redressal Officer in one of the following manners, namely:-
  - (a) by hand delivery; or
  - (b) by post and;
  - (c) By Telephone/fax/e-mail/SMS (whatever communication Opted by the complainant)
- (3) The date for hearing shall be communicated to the complainant and Anganwadi Worker along with the Supervisor of respective Block at least seven working days in advance.
- (4) The complainant and Anganwadi Worker along with the Supervisor of respective Block, shall make himself present during the hearing.
- (5) If any party remains absent on the date of hearing even after the intimation of hearing being duly served to him, then the complaint may be decided *ex-parte*.

**9. Powers of District Grievance Redressal Officer and procedure for Redressal of complaints. -**

- (1) The District Grievance Redressal Officer shall adopt the following procedure for Redressal of grievance on the complaints made under sub-section (5) of section 15 of the Act, namely: -

The District Grievance Redressal Officer shall,-

  - (a) take actions for expeditious and effective Redressal of grievance of the aggrieved person in matters relating to services being provided under ICDS and to enforce the entitlements of such services under the Act;
  - (b) inquire into the complaint made, examine the documents or their copies;
  - (c) inquire and ascertain genuineness of the eligibility criteria laid down by the Government from time to time;
  - (d) hear the complaint under sub-section (5) of section 15 of the Act or referred to him by the Nodal Officer of the concerned District/ Ahmedabad City or Suo-Moto by him;
- (2) The District Grievance Redressal Officer, while rendering the decision, shall declare speaking order within a period of thirty working days from the receipt the complaint.
- (3) The District Grievance Redressal Officer shall arrange to deliver the copies of the decision to the parties concerned within seven working days from the date of the order.
- (4) A monthly report of complaints received and disposed of during the month shall be sent by all the District Grievance Redressal Officers to the State Food Commission on or before the 10<sup>th</sup> of succeeding month.

**10. Procedure for hearing appeal before the State Food Commission. -**

- (1) any registered beneficiary of the ICDS Scheme against the decision of the District Grievance Redressal Officer may file a memorandum of Appeal under sub-section (6) of section 15 of the Act with the State Food Commission within thirty working days of such decision in **Form C**. Every memorandum of Appeal shall be in legible handwriting or typed.
- (2) Every Complaint made under sub-section (6) of section 15 of the Act shall be deemed to have been filed as an appeal.

- (3) The State Food Commission shall acknowledge the receipt of such appeal in **Form D** within three working days.
- (4) When the memorandum of Appeal is presented after thirty working days such memorandum of Appeal shall be accompanied by a delay condon application.
- (5) Any memorandum of Appeal so filed with the State Food Commission shall be heard and disposed of within a period of forty-five working days of the filing of such appeal.
- (6) The memorandum of Appeal shall be filed in triplicate and accompanied by the following documents duly self-attested, namely: -
  - (a) a copy of the orders of the District Grievance Redressal Officer against which appeal is preferred;
  - (b) copies of documents referred and relied upon by the appellant along with a list thereof;
  - (c) such other documents as may be required to support ground of objections mentioned in the memorandum of Appeal.
- (7) While hearing the Appeal the bench shall consider the grounds of appeal and shall decide the case accordingly.
- (8) Orders of the State Food Commission on appeal shall be signed and dated by the Members thereof hearing the appeal and shall be communicated to the parties free of cost.
- (9) The decision of the State Food Commission shall be final.

#### **11. Manner of disposal of appeal.-**

- (1) The State Food Commission shall issue the notice for hearing to the District Grievance Redressal Officer, Anganwadi Worker along with the Supervisor of the respective Block and to the registered beneficiary of ICDS Scheme within seven working days in advance from the date of receiving complaint,'
- (2) Intimation of hearing of the complaint shall be communicated by the State Food Commission in one of the following manners, namely: -
  - (a) by hand delivery; or
  - (b) by post and;
  - (c) by Telephone /fax/e-mail/SMS (whatever communication opted by the complainant.)
- (3) The date for hearing shall be communicated to the District Grievance Redressal Officer, Anganwadi Worker along with the Supervisor of the respective Block as the case may be, at least seven working days in advance.
- (4) The District Grievance Redressal Officer, the complainant and the Anganwadi Worker along with the Supervisor of the respective Block as the case may be, shall make himself present during the hearing.
- (5) If any party remains absent on the date of hearing even after the intimation of hearing being duly served to him, then appeal may be decided *ex-parte*.

**12. Maintenance of records of all cases under the Act.** - the District Grievance Redressal Officer, Nodal Officer and Appellate Authority shall maintain records of all the cases in **Form E** and **Form F**, respectively, with regard to the action taken.

**Form A**  
*(see sub-rule (1) of rule 7)*  
**Form for Complaint with District Grievance Redressal Officer**

To,

The District Grievance Redressal Officer

District.....

I want to complain regarding non-availability of services under the ICDS or matters relating thereto under the National Food Security Act, 2013, as shown below.

1. Full Name of Complainant:
2. Name of the Child enrolled at the Anganwadi Center  
OR  
Name of the Pregnant Woman / Lactating Mother / Adolescent Girl :
3. Full Address:
  - (a) House Number:
  - (b) Village/Locality:
  - (c) Taluka/Town:
  - (d) District:
  - (e) Pin code:
  - (f) Mobile or phone number (if any):
  - (g) E-mail address (if any):
4. Anganwadi Center Code and Address :
5. Whether Registered at Anganwadi Center or not ?
6. If yes, please provide details of the Month in which enrollment is done :
7. Description of complain:-
  - 1.
  - 2.
8. Documents enclosed in support of the complaint:-
  - I.
  - II.
9. Mode by which date of hearing is to be informed:
  - By hand delivery [ ]
  - By post [ ]
  - By Telephone /fax/e-mail/SMS [ ](Tick against the opted)

I hereby declare that I am a citizen of India and above details are true to the best of my knowledge and belief.

Place:

Date:

Signature or Thumb impression of the Complainant.



**Form B***(see sub-rule (3) of rule 7)***Acknowledgement :**

The above complaint is received from.....on Dt...../...../..20..... by  
the District Grievance Redressal Officer, District.....

Place:

Date:

Seal and Signature of the  
District Grievance Redressal Officer.

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**Form C**  
**(see sub-rule (1) of rule 10)**  
**(Appeal before the State Food Commission)**

To,  
The Chairperson,  
State Food Commission  
Address.....

I want to file an appeal against decision/order dated...../...../ of the District Grievance Redressal Officer, District.....

1. Full Name of Appellant :
2. Full Address :
  - a. House Number :
  - b. Village/Locality :
  - c. District :
  - d. Pin code :
  - e. Mobile or Phone Number (if any) :
  - f. E-mail address (if any) :
3. Anganwadi Center Code and Address :
4. Whether Registered at Anganwadi Center or not ?
5. If yes, please provide details of the Month in which enrollment is done
6. Mode by which date of hearing is to be informed :
  - By hand delivery [ ]
  - By post [ ]
  - By Telephone/Fax/e-mail/SMS [ ](Tick against the opted)

The self attested copy of decision/order of District Grievance Redressal Officer decision Dt...../...../20..... is enclosed herewith.

I find the said decision/order to be unjustified and unreasonable owing to following reasons (s) -

- 1.
- 2.

The authority may be pleased to strike down the decision / order of District Grievance Redressal Officer and pass any such further order and direction as it may consider just.

I hereby declare that I am a citizen of India and above details are true to the best of my knowledge and belief.

Place:

Signature the Appellant.

Date:

-----

**Form D***(see sub-rule (3) of rule 10)***Acknowledgement.**

The above Appeal is received on Dt...../...../..20..... by the State Food Commission against decision/order of the District Grievance Redressal Officer, District.....

Place:

Date:

Signature of the Appellant Authority.

-----

**Form E**  
(see rule 12)

**Register to be maintained by the District Grievance Redressal Officer/Nodal Officer**

**Name :**

**Designation :**

**District :**

**Address :**

| <b>Sr. No.</b> | <b>Name and Full address of the complainant with mobile phone number email if any</b> | <b>Anganwadi center Code</b> | <b>Anganwadi center Address</b> | <b>Whether registered at Anganwadi center as a beneficiary ? If yes, date and month in which enrollment is done.</b> | <b>Date of Complaint</b> | <b>Acknowledgement Date and No</b> | <b>Details of Grievance</b> |
|----------------|---|------------------------------|---------------------------------|--|--------------------------|------------------------------------|-----------------------------|
| <b>1</b>       | <b>2</b>  | <b>3</b>                     | <b>4</b>                        | <b>5</b>   | <b>6</b>                 | <b>7</b>                           | <b>8</b>                    |
|                |   |                              |                                 |  |                          |                                    |                             |
|                |   |                              |                                 |  |                          |                                    |                             |

| <b>Basis for Complaint</b> | <b>Relief asked</b> | <b>Date of Hearing</b> | <b>Date of disposal of Grievance</b> | <b>Decision of the DGRO</b> | <b>Whether Appeal preferred, if yes give Date</b> | <b>Decision of the State food commission</b> | <b>Action Taken</b> | <b>Remarks</b> |
|----------------------------|---------------------|------------------------|--------------------------------------|-----------------------------|---|--|---------------------|----------------|
| <b>9</b>                   | <b>10</b>           | <b>11</b>              | <b>12</b>                            | <b>13</b>                   | <b>14</b>   | <b>15</b>                                    | <b>16</b>           | <b>17</b>      |
|                            |                     |                        |                                      |                             |   |  |                     |                |
|                            |                     |                        |                                      |                             |   |  |                     |                |

**Form F**  
(see rule 12)

**Register to be maintained by Appellate Authority**

**Name :**

**Designation :**

**Address :**

| Sr. No. | Name and Full address of the complainant with mobile phone number email if any | Anganwadi center Code | Anganwadi center Address | Whether registered at Anganwadi center as a beneficiary ? If yes, date and month in which enrollment is done. | Date of Complaint | Acknowledgement Date and No | Details of Grievance |
|---------|--|-----------------------|--------------------------|---|-------------------|-----------------------------|----------------------|
| 1       | 2  | 3                     | 4                        | 5   | 6                 | 7                           | 8                    |
|         |  |                       |                          |   |                   |                             |                      |
|         |  |                       |                          |   |                   |                             |                      |

| Basis for Complaint | Relief asked | Date of Hearing | Date of disposal of Grievance | Decision of the DGRO | Whether Appeal preferred, if yes give Date | Decision of the State food commission | Action Taken | Remarks |
|---------------------|--------------|-----------------|-------------------------------|----------------------|--|---------------------------------------|--------------|---------|
| 9                   | 10           | 11              | 12                            | 13                   | 14   | 15                                    | 16           | 17      |
|                     |              |                 |                               |                      |  |                                       |              |         |
|                     |              |                 |                               |                      |  |                                       |              |         |

By order and in the name of the Governor of Gujarat,

**RAHUL CHHATRAPATI,**  
Deputy Secretary to Government

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# The Gujarat Government Gazette

## EXTRAORDINARY

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### PART IV-A

Rules and Orders (Other than those published in Parts I, I-A, and I-L) made  
by the Government of Gujarat under the Central Acts

#### LEGAL DEPARTMENT

#### Notification

Sachivalaya, Gandhinagar, 14<sup>th</sup> February, 2018.

#### The Protection of Children from Sexual Offences Act, 2012.

**No.:GK/04/2018/SPC/102012/GOI-35/D.-** In Exercise of the powers conferred by sub-section (1) of the section 28 of the The Protection of Children from Sexual Offences Act, 2012 (32 of 2012), (hereinafter referred to as "the said Act"), the Government of Gujarat, in consultation with the Chief Justice of High Court of Gujarat, hereby designates the Court of Additional District and Sessions Judge at Limkheda, District Dahod to be the 'Special Court' to try the offences under the said Act.

By order and in the name of the Governor of Gujarat,

**H. H. VARMA,**  
Deputy Secretary to Government.

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## EXTRAORDINARY

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### PART IV-A

Rules and Orders (Other than those published in Parts I, I-A, and I-L) made  
by the Government of Gujarat under the Central Acts

#### FOOD, CIVIL SUPPLIES AND CONSUMER AFFAIRS DEPARTMENT

#### Notification

Sachivalaya, Gandhinagar, 26<sup>th</sup> February, 2018.

#### Consumer protection Act, 1986

**No.:GTH/2018/04/CPA/102018/49494/D:-** In Exercise of the powers conferred by clause (a) of section 9 read with sub-section (1) (a), 1(A) & 2 of section-10 of the Consumer Protection Act, 1986 as amended in 1993 and 2002, Government of Gujarat hereby accepts the resignation of Shri H.G.Bhatt, President of Consumer Disputes Redressal Forum, Junagadh with effect from dated 28/2/2018 after office hours.

2. Mr.M.V.Gohil, President of Consumer Disputes Redressal forum, Rajkot (Add.) Should hold the addition charge of the post of President of Consumer Disputes Redressal Forum, Junagadh till the new appointment of President of District Redressal Forum of Junagadh.

By order and in the name of the Governor of Gujarat,

**M. Z. SHROFF,**  
Under Secretary to Government.



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# The Gujarat Government Gazette

## EXTRAORDINARY

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#### PART IV-A

**Rules and Orders (Other than those published in Parts I, I-A, and I-L) made  
by the Government of Gujarat under the Central Acts**

#### PORTS AND TRANSPORT DEPARTMENT

#### NOTIFICATION

Sachivalaya, Gandhinagar, 7<sup>th</sup> March, 2018.

#### MOTOR VEHICLES ACT, 1988.

**No. PT/2018/2/MVD/2013/1588/KH:-** In exercise of the powers conferred by sub-section (1) of section 67 of the Motor Vehicles Act, 1988 (59 of 1988), the Government of Gujarat hereby amends the Government Notification, Home Department No.GG/2002/87/MVA/1801/996/KH, dated the 23<sup>rd</sup> May, 2002 as follows:-

In the said notification, in the Schedule, after entry at serial number 5, the following entry shall be added, namely:-

| (1)   | (2)    | (3)   | (4)   |
|---|--------|---|---|
| "6.Motor cabs authorized to be used as Rural Taxi by the Regional Transport Authority for Aajeevika Grameen Express Yojana for the 10 routes of the Ghoghamba Tehsil of Panchmahal Distict and 4 routes of Garbada Tehsil of Dahod District as specified in the permit only subject to the following conditions namely :-<br>4. These motor cabs shall be non transferable.<br>5. Operation of these motor cabs shall be undertaken by Sakhi Mandals of said area only and Sakhi Mandal shall | Petrol | <b>C.</b> For Non-AC Motor Cabs-<br>iii. Rs.25/- Meter Downing Cost.<br>iv. Rs.15/- per running Kilometers or part thereof.<br><br><b>D.</b> For AC Motor Cabs 1.25 times of the above rates. | Maximum Rate of Rs.1/- for every sizeable package." |



| (1)  | (2) | (3) | (4) |
|--|-----|-----|-----|
| not sublet or transfer or assign the operation of the motor cabs to any other person or entity.<br>6. If there will be a representation submitted to the Government that by virtue of these operation the income of the buses run by GSRTC is decreasing, the Government will review the scheme and may take appropriate decision. |     |     |     |

By Order and in the name of the Governor of Gujarat,

**PRAKASH MAJMUDAR,**  
Deputy Secretary to Government.

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### PART IV-A

Rules and Orders (Other than those published in Parts I, I-A, and I-L) made  
by the Government of Gujarat under the Central Acts

#### INDUSTRIES AND MINES DEPARTMENT

#### NOTIFICATION

Sachivalaya, Gandhinagar, 9<sup>th</sup> March, 2018.

#### Mines and Minerals (Development and Regulation) Act, 1957.

**No. GJ/2018/12/MCR-102018-325-chh :-** In exercise of the powers conferred by section 15 of the Mines and Minerals (Development and Regulation) Act, 1957 (67 of 1957), the Government of Gujarat hereby makes the following rules further to amend the Gujarat Minor Mineral Concession Rules, 2017, namely :-

1. These rules may be called the Gujarat Minor Mineral Concession (Amendment) Rules, 2018.
2. In the Gujarat Minor Mineral Concession Rules, 2017 (hereinafter referred to as 'the said rules'), in rule 4, the following sub-rules shall be added after sub-rule (6), namely:-

“(7) Any person, owning more than fifty per cent, of the mineral block demarcated for auction or the person who has written consent to surface rights for more than fifty per cent, of such demarcated mineral block upon which the Government has conducted electronic auction under these rules, which shall include auction carried out under sub-rule (8) of this rule, shall have Right of First Refusal upon completion of the auction process in accordance with clause (e) of sub-rule (8) of this rule:

Provided that, if any person uses his right of first refusal he shall be treated as the ‘Preferred Bidder’ and has to fulfill all the conditions laid down under these rules as well as the Tender Document to be declared as the ‘Successful Bidder’.

(8) In case, if an area over which quarry lease is proposed to be granted, is owned by any person (“landowner”), the Government may conduct an auction in accordance with rule 7 and other provisions of these rules, for grant of a quarry lease over the land owned by the landowner: Provided that, if the Government considers such auction as expedient in public interest, it shall conduct the auction process subject to the following provisions, namely:-

- (a) The Government shall, on receipt of a written application from the landowner carry out Reconnaissance Survey (G4) in accordance with these rules on the land owned by the landowner.
- (b) Only in case of a favourable Reconnaissance Survey (G4) report of the mineral resource(s) in the land owned by the landowner pursuant to clause (a) above, the Government shall carry out further exploration to establish evidence of mineral resource(s) in accordance with the parameters prescribed in Schedule I of these rules.
- (c) The Government may initiate an electronic auction for grant of quarry lease in the manner specified in these rules in land owned by the landowner where evidence of mineral resources has been established in accordance with the parameters prescribed in Schedule I and the Government may include other contiguous mineral bearing land owned by the Government while demarcating the mineral block for such auction for grant of quarry lease.
- (d) The person who has written consent to surface rights of more than fifty per cent, of such demarcated mineral block (not including the contiguous area of Government land added by the Government), shall have such rights for the entire period of the proposed quarry lease.
- (e) in case of auction conducted pursuant to clause (c) above, within a period of thirty days from the date of conclusion of auction held for such quarry lease, the person entitled pursuant to sub-rule (7) of this rule and clause (d) above may opt to pay the amounts quoted by the relevant preferred bidder during such auction process under written intimation to the Government, alongwith all such payments required to be made by the relevant preferred bidder. Upon receipt of such intimation and other payments, the aforesaid landowner or person having access rights, as aforesaid, shall be considered to be the preferred bidder and the bid security, performance security and upfront payment, if any paid by the erstwhile preferred bidder, shall be returned”.

**3.** In the said rules, in rule 6, in sub-rule (1), in clause (c), the following proviso shall be inserted, namely:-

“Provided that quantity of mineral up to fifty per cent of total mineral dispatched in the previous financial year, for which end - use was specified, can be sold in the current financial year with the prior approval of the Commissioner of Geology and Mining.”

**4.** In the said rules, in rule 8, in sub-rule (3), - (i) for the words "such period from the date of issuance of the letter of intent as may be specified in the tender document", the words “a period of two years from the date of issuance of the letter of intent in case of minerals specified in Part A-II or Part B of Schedule III and within a period of one year from the date of issuance of the letter of intent in case of minerals specified in Part A-I of Schedule III” shall be substituted.

(ii) for the existing proviso, the following proviso shall be substituted, namely :-

“Provided that a successful bidder may request the Government to extend the time period so prescribed by it, by filing an application for extension at least one month prior to the expiry of the originally prescribed period. The application for extension shall provide bona-fide reasons for seeking an extension and such reasons should be beyond the control of the successful bidder. The Government may, at its sole discretion and for reasons to be recorded in writing, grant an extension to the successful bidder by an additional period of not more than one year in case of minerals specified in Part A-II or Part B of Schedule III and six months in case of minerals specified in Part A-I of Schedule III, if the reasons for delay were beyond the control of the successful bidder. In case the Government does not

grant an extension, the letter of intent shall expire in accordance with the terms thereof leading to automatic cancellation of the entire process of auction”.

(iii) the following explanation shall be added namely:- “Explanation: For the purpose of this sub-rule (3), the date of issuance of the letter of intent by State Government to the Preferred Bidder to become Successful Bidder shall be the date on which the letter of intent is hand delivered to the Preferred Bidder or date on which letter of intent is sent by Registered Post Acknowledgment Due.”

5. In the said rules, in rule 9, in sub-rule (1), in clause (a), for the words “one per cent”, the figure and words “0.25 per cent.” shall be substituted.

6. In the said rules, in rule 10, in sub-rule (1), for the words “one per cent”, the figure and words “0.25 per cent.” shall be substituted.

7. In the said rules, in rule 12, in sub-rule (1),-(i) in clause (a), for the figure “2025”, the figure letters and words “2030 for the quarry leases granted on land owned by the Government; upto a period ending on March 31, 2035 for the quarry leases granted on land not owned by the Government,” shall be substituted.

(ii) in clause (b), for the figure “2020”, the figures “2022” shall be substituted.

8. In the said rules, in rule 23, in sub-rule (1), - (i) for clause (a), the following shall be substituted, namely:-

“(a) quarry permits for extraction of minor minerals for the following thresholds and limits may be granted by the below mentioned authorities:

(i) quantity not exceeding five thousand metric tonnes for a period of up to 90 days shall be granted by the District Geologist or District Assistant Geologist, as the case may be;

(ii) quantity exceeding five thousand metric tonnes but not exceeding twenty thousand metric tonnes for a period of up to 90 days shall be granted by the District Collector:

Provided that the District Collector may, for the reasons to be recorded in writing, extend the period of quarry permit beyond 90 days for the quantities not exceeding twenty thousand metric tonnes, if the permit holder applies for extension 30 days prior to the expiry of the quarry permit;

(iii) quantity exceeding twenty thousand metric tonnes but not exceeding one lakh metric tonnes for a period of up to 180 days shall be granted by the Commissioner of Geology and Mining:

Provided that the Commissioner of Geology and Mining may, for the reasons to be recorded in writing, extend the period of quarry permit beyond 180 days for the quantity exceeding twenty thousand metric tonnes but not exceeding one lakh metric tonnes, if the permit holder applies for extension 30 days prior to the expiry of the quarry permit;

(iv) Quantity exceeding one lakh metric tonnes but up to five lakh metric tonnes for a period of up to 180 days shall be granted by the Secretary or Principal Secretary or as the case may be Additional Chief Secretary, Industries and Mines Department:

Provided that the Secretary or Principal Secretary or Additional Chief Secretary, as the case may be, may, for the reasons to be recorded in writing, extend the period of quarry permit beyond 180 days for the quantities exceeding one lakh metric tonnes but up to five lakh metric tonnes, if the permit holder applies for extension 30 days prior to the expiry of the quarry permit;

(v) the Government may grant a quarry permit for a period as it may deem fit, for quantities exceeding five lakh metric tonnes:

Provided that the Government, may, for the reasons to be recorded in writing, extend the period of quarry permit, if the permit holder applies for extension 30 days prior to the expiry of the quarry permit”.

(ii) after clause (a) the following clause shall be inserted, namely:-

“(aa) Any application for extension by a permit holder, if not applied prior to 30 days prior to the expiry of the quarry permit but before expiry of quarry permit, such application may be admitted, if the Government is satisfied that the applicant had just and sufficient cause for not submitting the application in stipulated period”.

9. In the said rules, in rule 29, for sub-rule (2), the following sub-rule shall be substituted, namely:-

“(2) Without prejudice to sub-rule (1), where before the commencement of these rules, the Government has communicated a prior written approval for grant of a quarry lease to an applicant; or if a letter of intent has been issued in writing to an applicant by the Government to grant a quarry lease, the quarry lease shall be granted in accordance with the provisions of sub-rules (3) to (6) (inclusive):

Provided that, if an applicant has applied for and obtained: (a) an environmental clearance; or (b) an approval for change in land use to non-agricultural purposes; or (c) an approval for mining plan, for conducting mining operations over the proposed lease area governed by these rules, prior to the commencement of these rules:

Provided further that, such person shall make a written representation before the Government with relevant documents and if Government deems fit, shall issue letter of Intent, which shall entitle such person to obtain a quarry lease, in the same manner as if such letter of intent was issued before the commencement of these rules”.

10. In the said rules, in rule 57, (i) in clause (a), for the words “fifty per cent”, the words “twenty five per cent” shall be substituted.

(ii) in clause (b), for the words “fifty percent”, the figure words “twenty five per cent” shall be substituted.

11. In the said rules, in SCHEDULE II:ELIGIBILITY CONDITIONS, in clause 3, (i) for the words “one per cent”, the figure and word “0.25 per cent” shall be substituted.

(ii) in Explanation (3), for the words “net worth shall be the closing cash balance on the last date for submission of the application and such”, the words “individual may provide an affidavit regarding the net worth or net worth certificate issued by a chartered accountant that is computed in accordance with applicable accounting standards and supported by any documents relating to unencumbered immovable properties (valued at circle rate or jantri rate published by the Government for the area where such immovable properties are situated) and other assets as per the latest Income Tax Return. Such” shall be substituted.

12. In the said rules, in FORM B: FORMAT OF QUARRY LEASE DEED, in clause 5.1.2, for the words “one per cent”, the figure and word “0.25 per cent.” shall be substituted.

By order and in the name of the Governor of Gujarat,

**D. G. CHAUDHARI,**  
Deputy Secretary to Government.

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# The Gujarat Government Gazette

## EXTRAORDINARY

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THURSDAY, MARCH 22, 2018/CAITRA 1, 1940

Separate paging is given to this Part in order that it may be filed as a Separate Compilation.

### PART IV-A

Rules and Orders (Other than those published in Parts I, I-A, and I-L) made  
by the Government of Gujarat under the Central Acts

Energy and Petrochemicals Department,

#### NOTIFICATION

Sachivalaya, Gandhinagar, 22<sup>nd</sup> March, 2018.

#### Constitution of India.

**No. GA/GUJ/2018/(19)/MVN/16-2016/629/E:-** In exercise of the powers conferred by the proviso to article 309 of the Constitution of India and in supersession of all the rules made in this behalf, the Governor of Gujarat hereby makes the following rules to provide for regulating recruitment to the post of Administrative Officer, Class II, in the General State Service under the office of the Chief Electrical Inspector, namely:-

1. These rules may be called the Administrative Officer, Class II, in the office of the Chief Electrical Inspector, Recruitment Rules, 2018.
2. Appointment to the post of Administrative Officer, Class II, in the General State Service under the office of the Chief Electrical Inspector shall be made either;
  - (a) by promotion of a person of proved merit and efficiency from amongst the persons who:
    - (i) have worked for not less than seven years in the cadre of Head Clerk, Class III, in the subordinate service of the office of the Chief Electrical Inspector; and
    - (ii) have passed the qualifying examination for computer knowledge in accordance with the provisions of the Gujarat Civil Services Computer Competency Training and Examination Rules, 2006.

Provided that where the appointing authority is satisfied that a person having the experience specified in sub - clause (i) above is not available for promotion and that it is necessary in the public interest to fill up the post by promotion even of a person having experience for a lesser period; it may, for reasons to be recorded in writing, promote such person who possesses experience of a period of not less than two - thirds of the period specified in sub - clause (i) above; or

(b) by direct selection.

3. To be eligible for appointment by direct selection to the post mentioned in rule 2, a candidate shall –

(A) not be more than 38 years of age:

Provided that the upper age limit may be relaxed in favour of a candidate who is already in the service of the Government of Gujarat in accordance with the provisions of the Gujarat Civil Services Classification and Recruitment (General) Rules, 1967:

Provided further that nothing contained in clause (b) of sub-rule (9) of rule 8 of the Gujarat Civil Services Classification and Recruitment (General) Rules, 1967 shall be applicable in so far as relaxation of upper age limit as prescribed above is concerned.

(B) possess, –

(i) a bachelor degree obtained from any of the Universities established or incorporated by or under the Central or a State Act in India; or any other educational institution recognised as such or declared to be deemed as a University under section 3 of the University Grants Commission Act, 1956 or possess an equivalent qualification as such recognised by the Government, and;

(ii) (a) have about three years' experience of administration on the post not below the rank of Senior Clerk, Class III, in the subordinate service of the Non Secretariat Departments and offices of the State of Gujarat, or;

(b) have about three years' experience in the field of administration in Government / Government Undertaking / Board / Corporation / Limited Company established under the Companies Act, 2013 on the post which can be considered equivalent to the post not below the rank of Senior Clerk, Class III, in the subordinate service of the Non Secretariat Departments and offices of the State of Gujarat;

(iii) the basic knowledge of computer application as prescribed in the Gujarat Civil Services Classification and Recruitment (General) Rules, 1967; and

(iii) adequate knowledge of Gujarati or Hindi or both.

4. The candidate appointed by direct selection shall be on probation for a period of two years.

5. The candidate appointed by direct selection shall, during his probation period, be required to undergo pre-service training and to pass the post training examination in accordance with the provisions of the Gazetted Officer's Pre-Service Training and Examination Rules, 1970.

6. The candidate appointed by direct selection shall, during his probation period, be required to pass the qualifying examination for computer knowledge in accordance with the provisions of the Gujarat Civil Services Computer Competency Training and Examination Rules, 2006.

7. The candidate appointed by direct selection shall be required to pass an examination in Hindi or Gujarati or both in accordance with the rules prescribed by the Government.
8. The candidate appointed either by direct selection or by promotion shall be required to undergo such training and to pass such examination as may be prescribed by the Government.
9. The candidate appointed by direct selection shall be required to furnish a security and surety bond in such form, for such amount and for such period as may be prescribed by the Government.

By order and in the name of the Governor of Gujarat,

**MAHESH PATEL,**

Joint Secretary to Government.

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### PART IV-A

Rules and Orders (Other than those published in Parts I, I-A, and I-L) made  
by the Government of Gujarat under the Central Acts

#### HOME DEPARTMENT

#### Notification

Sachivalaya, Gandhinagar, 19<sup>th</sup> March, 2018.

#### The Manoeuvres Field Firing And Artillery Practice Act, 1938.

**No.GG/10/2018/FAP/2094/4807/M---**In exercise of the powers conferred by sub-section (2) of Section 9 of the Manoeuvres Field Firing and Artillery Practice Act, 1938 (V of 1938) the Government of Gujarat has authorized the army authorities to carry out field Firing and Artillery Practice following area for the period of 10 years (from date 22.6.2008 to date 21/06/2018), notification even no, dated 03/07/2009 and dated 16/01/2015.

| Name of Taluka | Name of Village                | Location   | Approximate Areas |
|----------------|--------------------------------|--|-------------------|
| 1.             | 2.                             | 3.   | 4.                |
| Bhuj           | (Part of Banni Area)<br>Khavda | (Approximately 69 kms.<br>From Bhuj to the West of<br>Road Bhuj Near old<br>Layvara Village<br>(Deserted)Unsurvey) | 100 Sq.kms        |

2. Now in accordance with the proposal from District magistrate, Kutch-Bhuj, dated 12/06/2017 and time to time, looking to the positive opinion form the District Magistrate, Kutch-Bhuj, the Government of Gujarat hereby further authorizes the army authorities to carry out field Firing and

Artillery Practice at the above mentioned area for further 10 years from date 22/06/2018 to the date 21/06/2028.

3. Other terms and condition as mentioned in the Notification of the even no. dated 16/01/2015, will remain the same.

By order and in the name of the Governor of Gujarat,

**K. D. SUTHAR,**  
Joint Secretary to Government.

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### PART IV-A

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by the Government of Gujarat under the Central Acts**

#### LABOUR AND EMPLOYMENT DEPARTMENT

#### Notification

Sachivalaya, Gandhinagar, 17<sup>th</sup> March, 2018.

#### **Child and Adolescent Labour (Prohibition and Regulation) Act, 1986.**

**No.:KHR/2018/72/ECA/122017/785681/M(3):-** WHEREAS certain draft rules were published as required by sub section (1) of section 18 of the Child and Adolescent Labour (Prohibition and Regulation) Act, 1986 (61 of 1986) at pages 196-1 and 196-8 of the Gujarat Government Gazette, Extraordinary, Part IV-A, dated the, 30<sup>th</sup> December, 2017, under the Government Notification, Labour and Employment Department No. KHR/2017/189/ECA/ 122017/785681/M(3), dated the 22<sup>nd</sup> December, 2017, inviting objections and suggestions from all persons likely to be affected thereby within a period of thirty days from the date of publication of the said notification in the *Official Gazette*;

AND WHEREAS, no objection or suggestion has been received by the Government in respect to the said draft notification;

NOW, THEREFORE, In exercise of the powers conferred by section 18 of the Child and Adolescent Labour (Prohibition and Regulation) Act, 1986 (61 of 1986), the Government of Gujarat hereby makes the following rules further to amend the Child Labour (Prohibition and Regulation) (Gujarat) Rules, 1994, namely:-

1. (1) These rules may be called the Child Labour (Prohibition and Regulation) (Gujarat) (Amendment) Rules, 2017.  
(2) They shall come into force on the date of their publication in the *Official Gazette*.
2. In the Child Labour (Prohibition and Regulation) (Gujarat) Rules, 1994 (hereinafter referred to as "the said rules"), in rule 1, for the words "Child Labour", the words "Child and Adolescent Labour" shall be substituted.
3. In the said rules, in rule 2,  
(i) for clause (a), the following clause shall be substituted, namely: -

"(a) "Act" means the Child and Adolescent Labour (Prohibition and Regulation) Act, 1986 (61 of 1986)";

- (ii) after clause (b), the following clauses shall be inserted, namely: -

"(ba) "Fund" means the Child and Adolescent Labour Rehabilitation Fund constituted under sub-section (1) of section 14B of the Act;

(bb) "Inspector" means the Inspectors appointed by the State Government under section 17;

(bc) "Municipality" means an institution of Self-Government constituted under article 243 Q of the Constitution;

(bd) "Panchayat" means a Panchayat constituted under article 243B of the Constitution;"

(be) "Register" means the register required to be maintained under section 11 of the Act;

- (iii) after clause (c), the following clause shall be inserted, namely: -

"(d) Words and expressions used in these rules, but not defined therein and defined in the Act, shall have the meaning respectively assigned to them in the Act".

4. In the said rules, after rule 2 the following rules shall be inserted, namely: -

**"2A. Awareness on prohibition of employment of child and adolescent in contravention to the Act.** - The State Government, to ensure that the children and adolescents are not employed or permitted to work in any occupation or process in contravention to the provisions of the Act, through appropriate measures, shall -

- (a) arrange public awareness campaigns in using folk and traditional media and mass media including television, radio, internet and the print media to make the general public, including the employers and the children and adolescents who may be employed in contravention of the Act to aware about the provisions of the Act, and thereby discourage employers or other persons from engaging children and adolescents in any occupation or process in contravention of the provisions of the Act;

- (b) promote reporting of enterprises or instances of employment of children or adolescents in contravention to the provisions of the Act, by developing and advertising easily accessible means of communication to authorities specified by the State Government;
- (c) display to the possible extent the provisions of the Act, these rules and any other information relating thereto in toll plazas, major bus stations and other public places including shopping centers, markets, cinema halls, hotels, hospitals, Panchayat offices, Municipalities, police stations, resident welfare association offices, industrial areas, schools, educational institutions, court complexes, and offices of all authorities authorised under the Act;
- (d) promote through appropriate method the inclusion of the provisions of the Act in learning material and syllabus in school education; and
- (e) promote inclusion of training and sensitisation material on the provisions of the Act and the responsibilities of various stakeholders thereto, in State Labour Service, police, judicial and civil service academies, teachers training and refresher courses and arrange sensitization programmes for other relevant stakeholders including, Panchayat members, doctors and concerned officials of the State Government.

**2B. Child to help his family without affecting education.** - (1) Subject to the provisions of section 3, a child may, without affecting his school education, in any manner, may help his family in his family enterprise, subject to the condition that such help, -

- (i) shall not be in any hazardous occupation or process listed in Part A and Part B of the Schedule to the Act;
- (ii) shall only be allowed to help in his family, or in a family enterprise, where his family is the occupier;
- (iii) shall not perform any tasks during school hours and between 7 p.m. and 8 a.m.;
- (iv) shall not be engaged in such tasks of helping which hinders or interferes with the right to education of the child, or his attendance in the school, or which may adversely affect his education including activities which are inseparably associated to complete education such as homework or any extra-curricular activity assigned to him by the school;
- (v) shall not be engaged in any task continuously without rest which may make him tired and shall be allowed to take rest to refresh his health and mind, and a child shall not help for more than three hours excluding the period of rest in a day;
- (vi) shall not include in any way substitution of the child for an adult or adolescent while helping his family or family enterprise; and
- (vii) shall not be in contravention to any other law for the time being in force;

(2) Where a child receiving education in a school remains absent consecutively for thirty days without intimation to the Principal or Head Master of the school, then, the Principal or Head Master

shall report such absence to the concerned nodal officer referred to in clause (i) of sub-rule (1) of rule 5C for information.

**2C. Child to work as an artist.** - (1) Subject to the provisions of section 3, a child may be allowed to work as an artist subject to the following conditions, namely: -

- (a) no child shall be allowed to work for more than five hours in a day, and for not more than three hours without rest;
- (b) any producer of any audio -visual media production or any commercial event involving the participation of a child, shall involve a child in participation only after obtaining the permission from the District Magistrate of the district where the activity is to be performed and shall furnish to the District Magistrate before starting the activity an undertaking in Form IV and the list of child participants, consent of parents, name of the individual from the production or event who shall be responsible for the safety and security of the child, and ensure that all screening of his films and television programmes shall be made with a disclaimer specifying that if any child has been engaged in the shooting, then, all the measures were taken to ensure that there has been no abuse, neglect or exploitation of such child during the entire process of the shooting;
- (c) the undertaking referred to in clause (b) shall be valid for six months and shall clearly state the provisions for education, safety, security and reporting of child abuse in consonance with the guidelines and protection policies issued by the Government from time to time for such purpose including -
  - (i) ensuring facilities for physical and mental health of the child;
  - (ii) timely nutritional diet of the child;
  - (iii) safe, clean shelter with sufficient provisions for daily necessities; and
  - (iv) compliance to all laws applicable for the time being in force for the protection of children, including their right to education, care and protection, and against sexual offences;
- (d) appropriate facilities for education of the child to be arranged so as to ensure that there is no discontinuity from his lessons in school and no child shall be allowed to work consecutively for more than twenty-six days;
- (e) one responsible person be appointed for maximum of five children for the production or event, so as to ensure the protection, care and best interest of the child;
- (f) at least twenty per cent, of the income earned by the child from the production or event to be directly deposited in a fixed deposit account in a nationalised bank in the name of the child which may be credited to the child on attaining majority; and
- (g) no child shall be made to participate in any audio visual and sports activity including informal entertainment activity against his will and consent.

(2) For the purposes of clause (c) to the explanation to sub-section (2) of section 3, the expression "such other activity" contained therein, shall mean -

(i) any activity where the child himself is participating in a sports competition or event or training for such sports competition or event;

(ii) cinema and documentary shows on television, radio including reality shows, quiz shows, talent shows;

(iii) drama serials;

(iv) participation as anchor of a show or events; and

(v) any other artistic performances which the State Government permits in individual cases, which shall not include street performance for monetary gain."

5. In the said rules, in rule 3, in sub-rules (1) and (2), for the words "child" and "children", wherever they occur 'the words "adolescent" and "adolescents" shall be substituted' respectively.

6. In the said rules, in rule 4, in sub-rule (1), for the word "children", the word "adolescents" shall be substituted.

7. In the said rules, after rule 4, the following rule shall be inserted, namely: -

**"4A. Payment of amount to Child or Adolescent from and out of Child and Adolescent Labour Rehabilitation Fund. -** (1) The amount credited, deposited or invested, as the case may be, under sub-section (3) of section 14B to the Child and Adolescent Labour Rehabilitation Fund and the interest accrued on it, shall be paid to the child or adolescent in whose favour such amount is credited in the following manner, namely: -

(i) the Inspector having jurisdiction shall ensure that an account of such child or adolescent is opened in a nationalised bank and inform the bank in which the amount of the Fund is deposited or, as the case may be, to the officer responsible to invest the amount of the Fund under sub-section (3) of section 14B;

(ii) the interest accrued on the proportionate amount of the Fund in favour of the child or adolescent shall be transferred every six months to the account of the child or adolescent, as the case may be, by the bank or officer responsible to invest the amount under information to the Inspector;

(iii) when the concerned child or adolescent completes the age of eighteen years, then, as soon as may be possible forthwith or within a period of three months, the total amount credited, deposited or invested in favour of the child along with interest accrued thereon remaining in the bank or remaining so invested under sub-section (3) of section 14B, shall be transferred to the said bank account of child or adolescent, as the case may be; and

(iv) the Inspector shall prepare a report of the amount transferred under clause (ii) and clause (iii) with particulars of the concerned child or adolescent sufficient to identify him and send a copy of the report annually to the State Government for information.

(2) Any amount recovered by way of fine in pursuance of an order or judgement of a Court or by way of composition of offences in pursuance of a certificate issued by a District Magistrate for the contravention of the provisions of the Act, shall also be deposited in the Fund and shall be spent in accordance with such order or judgement."

8. In the said rules, for rule 5, the following rule shall be substituted, namely: -

**"5. Certificate of age.** - (1) Where an Inspector has an apprehension that any adolescent has been employed in any of the occupation or processes in which he is prohibited to be employed under section 3A of the Act, he may require the employer of such adolescent to produce a certificate of age from the appropriate medical authority.

(2) The appropriate medical authority shall, while examining an adolescent for issuing the certificate of age under sub-rule (1), take into account -

(i) the Aadhar card of the adolescent, and in the absence thereof;

(ii) the date of birth certificate from school or the matriculation or equivalent certificate from the concerned examination Board of the adolescent, if available, and in the absence thereof;

(iii) the birth certificate of the adolescent given by a Municipality or a Panchayat;

and only in the absence of any of the methods specified in clauses (i) to (iii), the age shall be determined by such medical authority through an ossification test or any other latest medical age determination test.

(3) The ossification test or any other latest medical age determination test shall be conducted on the order of the concerned Inspector and such determination shall be completed within fifteen days from the date of such order.

(4) The certificate of age referred to in sub-rule (1) shall be issued in Form III.

(5) The charges payable to the medical authority for the issue of the certificate of age shall be same as specified by the State Government, for its Medical Boards.

(6) The charges payable to the medical authority shall be borne by the employer of the adolescent whose age is determined under this rule.

**Explanation.** - For the purposes of this rule, "medical authority" means a Government medical doctor not below the rank of an Assistant Surgeon of a District or a regular doctor of equivalent rank employed in Employees' State Insurance dispensaries or hospitals"

9. In the said rules, after rule 5, the following rules shall be inserted, namely: -

**"5A Persons who may file complaint.** - Any person who may file a complaint under the Act for commission of any offence include school teachers and representatives from school management committee, child protection committee, Panchayat or Municipality, who shall be sensitised to file complaint, in the event that any of students in their respective schools is employed in contravention to the provisions of the Act.

**5B. Manner of compounding offences.** - (1) An accused person, -

(i) who commits an offence for the first time under sub-section (3) of section 14; or



- (ii) who being parent or a guardian, commits an offence under the said section, may file an application to the District Magistrate having jurisdiction for compounding the offence under sub-section (1) of section 14D.

(2) The District Magistrate shall after hearing the accused person and the Inspector concerned, on an application filed under sub-rule (1), dispose of such application, and if the application is allowed, issue the certificate of compounding, subject to -

- (i) the payment of a sum of fifty per cent, of the maximum fine provided for such offence within a period to be specified in such certificate; or
- (ii) the payment of an additional sum of twenty-five per cent, of the maximum fine provided for such offence together with the compounding amount specified under clause (i); if the accused person fails to pay the compounding amount under the said clause (i) or (ii), as the case may be, within the specified period, such delayed payment shall be made within a further period as may be specified by the District Magistrate, which shall not exceed the period specified in such certificate.

(3) The compounding amount shall be paid by the accused person to the Fund.

(4) If the accused person fails to pay the compounding amount under sub-rule (2), then, the proceeding shall be continued as specified under sub-section (2) of section 14D.

**5C. Duties of District Magistrate.** - (1) The District Magistrate shall -

- (i) specify such officers subordinate to him, as he considers necessary, to be called nodal officers, who shall exercise all or any of the powers and perform all or any of the duties of the District Magistrate conferred and imposed on him by the State Government under section 17A;
- (ii) assign such powers and duties, as he thinks appropriate, to a nodal officer to be exercised and performed by him within his local limits of jurisdiction as subordinate officer;
- (iii) preside over as chairperson of the Task Force to be formed in a District consisting of -
  - (a) Assistant Commissioner of Labour for the purposes of his local limits of jurisdiction.
  - (b) Superintendent of Police for the purposes of his local limits of jurisdiction/ representative of concerned Commissioner of Police;
  - (c) Additional District Magistrate;
  - (d) nodal officer referred to under clause (i) for the purposes of his local limits of jurisdiction;

- (e) two representatives each from a voluntary organisation involved in rescue and rehabilitation of employed children in the district on rotation basis for a period of two years;
- (f) a representative of the District Legal Services Authority to be nominated by the District Judge;
- (g) a member of the District Anti-trafficking Unit;
- (h) Chairperson of the Child Welfare Committee of the District;
- (i) District Child Protection Officer in the District under the Integrated Child Protection Scheme of the Ministry of the Government of India dealing with women and child development;
- (j) District Education Officer;
- (k) Deputy/Assistant Director of Industrial Safety and Health;
- (l) any other person nominated by the District Magistrate;
- (m) Secretary of the Task Force shall be any of the nodal officers referred to in clause (i) and nominated by the Chairperson.

(2) The Task Force referred to in clause (iii) of sub-rule (1) shall meet at least once in every month and shall make a comprehensive action plan for conducting the rescue operation, taking into account the time available, point of raid in accordance with the law for the time being in force, confidentiality of the plan, protection of victims and witnesses and the interim relief, in accordance with the guidelines for rescue and repatriation issued by the State Government from time to time; and the Task Force shall also cause to upload the minutes of such meeting on the portal created for such purpose by the Central Government.

(3) In addition to the duties referred to in sub-rule (1), the District Magistrate shall ensure through nodal officers that the children and adolescents who are employed in contravention of the provisions of the Act are rescued and shall be rehabilitated -

(a) in accordance with the provisions of -

- (i) the Juvenile Justice (Care and Protection of Children) Act, 2015 (2 of 2016) and the rules made there under;
- (ii) the Bonded Labour System (Abolition) Act, 1976 (19 of 1976);
- (iii) the Central Sector Scheme for Rehabilitation of Bonded Labourers, 2016;
- (iv) any National Child Labour Project;

(v) any other law or scheme for the time being in force under which such children or adolescents may be rehabilitated; and subject to -

(I) the directions, if any, of a court of competent jurisdiction;

(II) the guidelines for rescue and repatriation issued by the Central Government or by the State Government from time to time in this regard.

**5D. Duties of Inspectors.** - An Inspector appointed by the State Government under section 17, for the purposes of securing compliance with the provisions of the Act, shall-

(i) comply with the norms of inspection issued by the State Government from time to time;

(ii) comply with the instructions issued by the State Government from time to time for the purposes of securing the compliance with the provisions of the Act; and

(iii) report the State Government monthly regarding the inspection made by him for the purposes of securing the compliance with the provisions of the Act and the action taken by him for such purposes.

**5E. Periodical inspection and monitoring.** - The State Government shall create a system of monitoring and inspection for carrying into effect the provisions of section 17B, which may include-

(i) the number of periodical inspection to be conducted by the Inspector of the places at which the employment of children/adolescent is prohibited and hazardous occupations or processes are carried out;

(ii) the intervals at which an Inspector shall report to the State Government complaints received to him relating to the subject matter of inspection under clause (i) and the details of action taken by him thereafter;

(iii) maintenance of record electronically or otherwise of-

(a) children and adolescent found to be working in contravention of the provisions of the Act including children who are found to be engaged in family or family enterprises in contravention of the Act;

(b) number and details of the offences compounded;

(c) details of compounding amount imposed and recovered; and

(d) details of rehabilitation services provided to children and adolescents under the Act."

10. in the said rules, in Form-I, for the words "child" and "children" wherever it occurs, the words "adolescent" and "adolescents" shall be substituted' respectively.

11. in the said rules, in Form -II, for the word "child", the word "adolescent" shall be substituted, [respectively.]

12. in the said rules, after Form -III, the following Form shall be inserted, namely: -

**"FORM IV***fSee Rule 2C(1)(b)l*

Undertaking under rule 2C(1)(b) of the Child and Adolescent Labour (Prohibition and Regulation)  
(Gujarat) Rules, 1994.

I .....producer of.....  
an audio visual media production or organizer of ..... a  
commercial event, involving the participation of the following child/children, namely: -

| Sr. No. | Name of the<br>Child/Children | Parent's/Guardian's<br>Name | Address |
|---------|-------------------------------|-----------------------------|---------|
| 1.      | 2.                            | 3.                          | 4.      |
| 1.      |                               |                             |         |
| 2.      |                               |                             |         |

do hereby undertake that in the course of the involvement of the above mentioned child/children in the event.....(specify the event), there shall be no violation of any of the provisions of the Child and Adolescent Labour (Prohibition and Regulation) Act, 1986 (61 of 1986) and the Child and Adolescent Labour (Prohibition and Regulation)(Gujarat) Rules, 1994 and full care shall be taken of the physical and mental health, and other requirements of the child/children, so that he/they feel no inconvenience. I also undertake that during the event, all laws applicable for the time being in force for the protection of children, including their right to education, care and protection, and legal provisions against sexual offences will be complied.

Date: .....

Name and signature of the Producer.'

Place: .....

By order and in the name of the Governor of Gujarat,

**R. H. VASAVA,**  
Deputy Secretary to Government.

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# The Gujarat Government Gazette

## EXTRAORDINARY

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### PART IV-A

Rules and Orders (Other than those published in Parts I, I-A, and I-L) made  
by the Government of Gujarat under the Central Acts

#### LABOUR AND EMPLOYMENT DEPARTMENT

#### Notification

Sachivalaya, Gandhinagar, 17<sup>th</sup> March, 2018.

#### Child and Adolescent Labour (Prohibition and Regulation) Act, 1986.

**No.:KHR/2018/73/ECA/122017/785681(1)/M(3) :-** WHEREAS, certain draft rules were published as required by section 13 of the Child and Adolescent Labour (Prohibition and Regulation) Act, 1986 (61 of 1986) at pages 195-1 and 195-2 of the Gujarat Government Gazette, Extraordinary, Part IV-A, dated the, 30<sup>th</sup> December, 2017, under the Government Notification, Labour and Employment Department NO.KHR/2017/188/ECA/122017/ 785681 (1)/M(3), dated the 22<sup>nd</sup> December, 2017, inviting objections and suggestions from all persons likely to be affected thereby within a period of thirty days from the date of publication of the said notification in the *Official Gazette*.

AND WHEREAS, no objection or suggestion has been received by the Government in respect to the said draft notification;

NOW, THEREFORE, In exercise of the powers conferred by section 13 of the Child and Adolescent Labour (Prohibition and Regulation) Act, 1986 (61 of 1986), the Government of Gujarat hereby makes the following rules further to amend the Child Labour (Health and Safety) (Gujarat) Rules, 1994, namely:-

1. (1) These rules may be called the Child Labour (Health and Safety) (Gujarat) (Amendment) Rules, 2017.  
(2) They shall come into force on and from the date of their publication in the *Official Gazette*.
1. In the Child Labour (Health and Safety) (Gujarat) Rules, 1994 (hereinafter referred to as "the said rules"), in rule 1, for the words "Child Labour", the words "Child and Adolescent Labour" shall be substituted.
2. In the said rules, in rule 3, for the words 'Children' and 'Child' wherever they occurs the words 'Adolescents' and 'Adolescent' shall be substituted' respectively.
3. In the said rules, in Form II -
  - (i) In serial number 4, for the word "children", the word "Adolescents" shall be substituted;
  - (ii) In serial number, 5, 6 and 7 for the word "child", the word "Adolescent" shall be substituted;

By order and in the name of the Governor of Gujarat,

**R. H. VASAVA,**  
Deputy Secretary to Government.

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# The Gujarat Government Gazette

**EXTRAORDINARY**  
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## PART IV-A

**Rule and Orders (Other than those published in Parts I, I-A, and I-L) made  
by the Government of Gujarat under the Central Acts**

### LEGAL DEPARTMENT

#### Notification

Sachivalaya, Gandhinagar, 31<sup>st</sup> March, 2018

The Commission of Inquiry Act, 1952

**No.GK/06/2018/COI/102017/244/A.— WHEREAS** the Government has under Government Notification, Legal Department No.GK/69/2017/COI/102017/244/A dated the 3<sup>rd</sup> October, 2017 appointed a Commission of Inquiry under section 3 of the commission of Inquiry act, 1952 (60 of 1952) to inquire into the Patidar Anamat Andolan Samiti and other allied organizations have been agitating for reservation in education as well as in Government services for the persons belonging to Patidar Community since the year 2015.

**AND WHEREAS** the Commission was required to complete the inquiry and submit its report to the government of Gujarat as soon as possible but not later than six month from the date of this Notification;

**AND WHEREAS** the said Commission is not likely to complete the inquiry and submit its report into the said matter to the state Government till;

**AND WHEREAS** the Government of Gujarat is of the opinion that Commission should complete the inquiry and submit its report to the state Government on or before the 31<sup>st</sup> October, 2018;

**NOW, THEREFORE,** the exercise of the powers conferred by section 3 of the commission of inquiry act, 1952 (60 of 1952), the Government of Gujarat hereby amends the Government Notification, Legal Department No.GK/69/2017/COI/102017/244/A, dated 3<sup>rd</sup> October, 2017 as follow a namely:-

In the said notification, in paragraph 4, for words, figures and letters "as soon as possible but not later than six month from the date of this Notification" the words, figures and letters "on or before the 31<sup>st</sup> October, 2018." shall be substituted.

By order and in the name of the Governor of Gujarat,

**H. R. SHAH,**  
Deputy Secretary to Government,  
Legal Department.



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# The Gujarat Government Gazette

## EXTRAORDINARY

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THURSDAY, APRIL 5, 2018/CAITRA 15, 1940

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### PART IV-A

Rule and Orders (Other than those published in Parts I, I-A, and I-L) made  
by the Government of Gujarat under the Central Acts

#### REVENUE DEPARTMENT

##### Notification

Sachivalaya, Gandhinagar, 26<sup>th</sup> March, 2018

**No.:- GHM/2018/39/S-30/SLP-23292-14/V4:** In exercise of the judgement of the Hon.Supreme Court of India, dated 02/11/2015 IN SLP© No. 23292/2014 IN LPA No. 965/2011 IN SCA No. 7069/1999 the Government of Gujarat hereby appoints Competent Authority & Deputy Collector (Land Reforms), Surat for deciding the said case in accordance with function to be performed under the Urban Land (Ceiling and Regulation) Repeal Act, 1999.

By order and in the name of the Governor of Gujarat.

**ASHOK B. PATEL,**

Deputy Secretary to Government

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# The Gujarat Government Gazette

## EXTRAORDINARY

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#### PART IV-A

Rule and Orders (Other than those published in Parts I, I-A, and I-L) made  
by the Government of Gujarat under the Central Acts

#### PORTS AND TRANSPORT DEPARTMENT

#### Notification

Sachivalaya, Gandhinagar, 5<sup>th</sup> April, 2018

#### Motor Vehicle Act, 1988

**No. PT/2018/ 3 /MVA/18/2009/3209/KH:**— In exercise of the powers conferred by sub-section (1) of Section 67 of the Motor Vehicle Act, 1988 and in supersession of Government Notification, Ports & Transport Department No. PT/2014/6/MVA/18/2009/3209/KH, dated 20<sup>th</sup> February, 2014, the Government of Gujarat having regard to the provisions of clause (a) of said sub-section (1), hereby issue directions to the State Transport Authority and the Regional Transport Authorities regarding fixing of fares and freights for the contract carriages with seating capacity of 3 (three) adult passengers excluding the driver and generally known as auto rickshaws plying in the State of Gujarat as specified in Schedule appended to this Notification with effect from the date of publication of the same in the *official Gazette*, namely:-

Fares and freights for the contract carriages specified in column 1 of the Schedule appended hereto plying in the State of Gujarat, shall be subject to such minimum and maximum fares as specified against them in column 2 and 3 respectively of the Schedule;

#### SCHEDULE

| Contract Carriage  | Fares  | Freight  |
|--|--|--|
| 1  | 2  | 3  |
| Motor Cabs with seating capacity of three adult passengers excluding the driver, generally known as auto rickshaws | <p>(I). For journey inside the municipal and contiguous cantonment limits the Fares shall be:-</p> <p>(a) For the first 1.2 kilometer or part thereof Rs.15/- (Rupees Fifteen only).</p> <p>(b) for subsequent each 1/5 kilometer or part thereof Rs.2.00 (Rupee Two only)</p> | <p>Rs. 1/- (Rupee one) per article of luggage:</p> <p>Provided that article not exceeding fifteen kilograms in the aggregate shall not be charged:</p> <p>Provided further that no part of luggage carried should project outside the vehicle and that the maximum luggage carried shall be sixty kilograms.</p> |

| Contract Carriage | Fares  | Freight |
|-------------------|--|---------|
| 1                 | 2  | 3       |
|                   | <p>(II). for journey outside the municipal and contiguous cantonment limits, fares can be charged at one and half times the rate mentioned in clause (1) above, for that portion of journey which lies outside the municipal and cantonment limits:</p> <p>provided that when the auto rickshaw is hired for a journey outside the municipal and contiguous cantonment limits and the passengers perform the return journey in the same auto rickshaw and come back within the municipal and contiguous cantonment limits irrespective of the original journey has started, the entire journey shall be charged at the rate specified in clause (I) above.</p> |         |
|                   | (III). Detention i.e. waiting charges shall be Rs. 1/- (Rupee One) for every five minutes after expiry of the first five minutes.  |         |
|                   | (IV). The maximum waiting limit should be one hour within the city limit and the cantonment area, and two hours for outside the city area.   |         |
|                   | (V). Surcharge at 50% of the basic fares specified in clause I and II above shall be charged for journey between 11-00 p.m. and 5-00 a.m. if the journey commences between 11-00 p.m. and 5.00 a.m. irrespective of the time of conclusion of journey.   |         |

**Note:-** For the purpose of this Notification "luggage" means any goods carried by the passengers in the auto rickshaw.

By order and in the name of the Governor of Gujarat,

**PRAKASH MAJMUDAR,**  
Deputy Secretary to Government.

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# The Gujarat Government Gazette

## EXTRAORDINARY

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### PART IV-A

**Rules and Orders (Other than those published in Parts I, I-A, and I-L) made by the Government of Gujarat under the Central Acts**

#### LEGAL DEPARTMENT

#### Notification

Sachivalaya, Gandhinagar, 2<sup>nd</sup> April, 2018.

#### Wakf Act, 1995.

**No.GK/ 07 /HCC/102016/11/209/E:-** In exercise of the powers conferred by the section 14 of Act, the Wakf Act, 1995 (43 of 1995) and Wakf (Amendment) Act, 2013 (27 of 2013) the Government of Gujarat hereby reconstitutes and appoints the following persons as the members of the Gujarat State Wakf Board.

| Sr. No. | Name  | Address   |
|---------|---|---|
| 1.      | Shri Sajjad Hira  | 4, Diwanpara, Rukun Mension, Rajkot.  |
| 2.      | Shri Afzalkhan Habibkhan Pathan                                       | 5, Chinar Park, Near Age High School, Memon Hall Road, Juhapura, Ahmedabad. |
| 3.      | Shri Amadbhai Jat   | Rabbani Manzil, Ghodar Road, 581, Bhuj, Dist. Kuchchh.                      |
| 4.      | Shri Rukaiyaben S. Gulamhusenwala                                     | Panchmahal.   |
| 5.      | Shri Badruddin Halani   | G-2, Blue Bird Apartment, Behind Shreyas Tower, N.H.8, Vapi.                |
| 6.      | Shri Ahmedbhai Patel, Member of Parliament                            | At: Piraman, Tal. Ankleshwar, Dist. Bharuch.                                |
| 7.      | Shri Mahmad Javed Abdulmutlib Pirzada, Member of Legislative Assembly | At: Dargah Sharif, Laxmipara, Ta. Wankaner, Dist. Rajkot.                   |

| <b>Sr. No.</b> | <b>Name</b>                       | <b>Address</b>             |
|----------------|-----------------------------------|----------------------------|
| 8.             | Shri Mirza Sajidhusen Mahemudmiya | Bayad, Dist. Aravalli      |
| 9.             | Shri Sirajbhai Madakia            | Visavadar, Dist. Junagadh. |
| 10.            | Shri Asmakhan Pathan              | Kheda                      |

By order and in the name of the Governor of Gujarat,

**I. J. VORA,**  
Secretary to Government.

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# The Gujarat Government Gazette

## EXTRAORDINARY

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### PART IV-A

**Rules and Orders (Other than those published in Parts I, I-A, and I-L) made  
by the Government of Gujarat under the Central Acts**

**Narmada, Water Resources, Water Supply and Kalpsar Department,**

#### NOTIFICATION

Sachivalaya, Gandhinagar, 12<sup>th</sup> April, 2018.

#### Constitution of India.

No.GN/3/2018/EST/10/2016/10/G:- In exercise of the powers conferred by the provision to article 309 of the Constitution of India and in supersession of all the rules made in this behalf, the Governor of Gujarat hereby makes the following rules to provide for regulating recruitment to the post of Work Assistant, Class III, in the subordinate service of the Narmada, Water Resources, Water Supply and Kalpsar Department, Gujarat State, Namely:-

1. These rules may be called the Work Assistant, Class III in the subordinate service of the Narmada, Water Resources, Water Supply and Kalpsar Department, Recruitment Rules, 2017.
2. Appointment to the post of Work Assistant, Class III in the subordinate service of the Narmada, Water Resources, Water Supply and Kalpsar Department, Gujarat State shall be made by direct selection.
3. To be eligible for appointment by direct selection to the post mentioned in rule 2, a candidate shall,-

A) not be more than 33 years of age:

Provided that the upper age limit may be relaxed in favour of a candidate who is already in the service of the Government of Gujarat in accordance with the provisions of the Gujarat Civil Services Classification and Recruitment (General) Rules, 1967;

(B) Possess,-

- I. a Diploma in Civil Engineering obtained from Technical Examination Board or any of the Universities established or incorporated by or under the Central or a State Act

in India; or any other educational institutions recognised as such or declared to be deemed as a University under section 3 of the University Grants Commission Act, 1956,

- II. basic knowledge of computer application as prescribed in the Gujarat Civil Services Classification and Recruitment (General) Rules, 1967; and
- III. adequate knowledge of Gujarati and Hindi.

- 4. The provisions of rules 9 (A) of the Gujarat Civil Services Classification and Recruitment (General) Rules, 1967 shall be applicable in respect of a candidate appointed by direct selection.
- 5. The candidate appointed by direct selection shall required to undergo such training and pass such examination as may be prescribed by the Government.
- 6. The candidate appointed by direct selection shall be required to furnish a security and surety bond in such form, for such amount and for such period as may be prescribed by the Government.

By Order and in the name of the Governor of Gujarat,

**ASHVIN VYAS,**

Under Secretary to Government.

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# The Gujarat Government Gazette

## EXTRAORDINARY

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### PART IV-A

Rules and Orders (Other than those published in Parts I, I-A, and I-L) made  
by the Government of Gujarat under the Central Acts

#### WOMEN AND CHILD DEVELOPMENT DEPARTMENT

##### Notification

Sachivalaya, Gandhinagar, 12<sup>th</sup> April, 2018.

#### PROTECTION OF WOMEN FROM DOMESTIC VIOLENCE ACT-2005

**No.GS (1)-18-MHY-102010-1875(2)-A:-** In exercise of the powers conferred by section 2(t) of the protection of women from Domestic Violence Act 2005 (43 of 2005)/The Government of Gujarat is pleased to cancel the recognition of Service Provider for;

- (1) Satyam Education Trust, Patel Chali, Opposite Tulsi Hotel, Ankleshwar Road, Dediapada, Dist-Narmada
- (2) Bhagini Mandal Godhara, Akhil Hind Mahila Parishad Godhara branch, Mu.Road, Kalal Darvaja, Godhara, Dist-Panchmahal.
- (3) Shramajivi Mahila Kalyan Trust, Shramjivi sevalay, Opposite Railway Station, Near Alankar Talkies, Surat.
- (4) Gayatri Seva Sangh, F-20, Swaminarayan Appartment, Opposite Jalaram Temple, Mini Virpur, Palanpur Jakatnaka, Choryasi, Dist-Surat
- (5) Jaybharati lok Vigyan Kendra, Kailash complex, 1<sup>st</sup> Floor, Below Pacific cortal, NH-8, Kamrej, Dist-Surat.
- (6) Shri Gurukrupa Education and welfare Trust, Saikrupa, Fadke Nivas, Malivad, Vyara, Dist-Tapi
- (7) Shri Madhvi Gramodyog Mandal, Madni Complex, Near Kamal Petrol Pump, Jambusar Road, Amod, Dist-Bharuch
- (8) Amadavad Women's Action Group, Avajdar, Opposite General Hospital, Bapunagar, Ahmedabad, Dist-Ahmedabad
- (9) Jyotisangh, Bhimjipura, Navavadaj, Ahmedabad, Dist-Ahmedabad

- (10) Guajrat Masturat Seva Trust, Bukhara Hostel, Khamasa, Dhalgarvad, Ahmedabad, Dist-Ahmedabad.
- (11) Swami Shunyanand Seva Trust, Ambika Corpo. 1<sup>st</sup> Floor, Ganj Road, Palanpur, Dist-Banaskantha.
- (12) Shri Banas Vikas Jagruti Mandal, Opposite Mamlatdar Office, Chatreshwari Bhuvan 2<sup>nd</sup> Floor, Danta, Dist-Banaskantha.
- (13) Nutan Gram Vikas Seva Trust, house of Jain Babulal Mangilal, Neminath Society, Behind Civil Hospital, Opposite Court, Disa, Dist-Banaskantha.
- (14) Adhvait Sarvjanik Trust, Near Khetivadi Utpann Bazar Samittee, Ambika Shoping Centre, At & Po-Dhanera, Dist-Banaskantha.

By order and in the name of the Governor of Gujarat,

**HANSABEN MEJIYATAR,**

Joint Secretary to Government

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# The Gujarat Government Gazette

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### PART IV-A

**Rules and Orders (Other than those published in Parts I, I-A, and I-L) made  
by the Government of Gujarat under the Central Acts**

#### **Gujarat Ecological Education and Research**

**(GEER) Foundation, Gandhinagar**

#### **Notification**

Dated the : 24<sup>th</sup> April, 2018.

#### **Rules of the Gujarat Ecological Education and Research (GEER) Foundation.**

**No. EST/1/S.F.-62/816:-** In exercise of the powers conferred by the clause (x) of rule 20 of the Rules of the Gujarat Ecological Education and Research Foundation, the Board of the Gujarat Ecological Education and Research (GEER) Foundation hereby makes the following rules to provide for regulating recruitment to the post of Scientist B, in the Gujarat Ecological Education and Research (GEER) Foundation, namely:-

1. (a) These rules may be called the Scientist B, in the Gujarat Ecological Education and Research (GEER) Foundation Recruitment Rules, 2018.  
(b) They shall come into force at once.
2. Appointment to the post of Scientist B, in the Gujarat Ecological Education and Research (GEER) Foundation shall be made either:-
  - (a) by promotion of a person of proved merit and efficiency from amongst the persons who :
    - (i) have worked for not less than eight years in the cadre of Senior and Junior Scientific Assistant, in the Gujarat Ecological Education and Research (GEER) Foundation; and
    - (ii) possess the educational qualification as prescribed in sub rule (b) of rule 3 for direct selection, and
    - (iii) have passed the qualifying examination for computer knowledge in accordance with the provisions of the Gujarat Civil Services Computer Competency (Training and Examination) Rules, 2006 or the examination for computer knowledge as may be prescribed by the Gujarat Ecological Education and Research (GEER) Foundation.

Provided that where the appointing authority is satisfied that a person having the experience specified in sub clause (i) above is not available for promotion and that it is necessary in the public interest to fill up a post by promotion even of a person having experience for a lesser period; it may, for reasons to be recorded in writing, promote such person who possesses experience of a period of not less than two thirds of the period specified in sub clause (i) above with the approval of Government; or

(b) by direct selection.

3. To be eligible for appointment by direct selection to the post mentioned in rule – 2, a candidate shall –

(a) not be less than 18 years and not be more than 42 years of age;

Provided that the upper age limit may be relaxed in favour of a candidate belonging to Scheduled Castes or Scheduled Tribes or Socially and Educationally Backward Classes or Economically Weaker Sections or Women in accordance with the provisions of the Gujarat Civil Services Classification and Recruitment (General) Rules, 1967.

(b) possess

(i) a Doctorate degree (Ph.D.) in Environment Science or Chemistry or Bio-chemistry or Bio-technology or Micro-biology or Aquatic Biology or Marine Biology or Bio Science of any of the Universities established or incorporated by or under the Central or State Act in India or any other educational institution recognized as such or declared to be a deemed university under section 3 of the University Grants Commission Act, 1956; and have atleast three years experience in different aspects of Laboratory Management including handling of advance instruments and work experience of analysis of waste water or molecular biology or Research and Development or Scientific Activities and Services or Science and Technology Programme and Planning Development in Government or Government undertaking Board or Corporation or Industrial or Academy or Science and Technology Organization on the post which can be considered equivalent to the post not below the rank of Senior and Junior Scientific Assistant, in Gujarat Ecological Education and Research (GEER) Foundation, or

(ii) a post graduate degree in Environment Science or Chemistry or Bio-chemistry or Bio-technology or Micro-biology or Aquatic Biology or Marine Biology or Bio Science of any of the Universities established or incorporated by or under the Central or State Act in India or any other educational institution recognized as such or declared to be a deemed university under section 3 of the University Grants Commission Act, 1956; and have atleast five years experience in different aspects of Laboratory Management including handling of advance instruments and work experience of analysis of waste water or molecular biology or Research and Development or Scientific Activities and Services or Science and Technology Programme and Planning Development in Government or Government undertaking Board or Corporation or Industrial or Academy or Science and Technology Organization on the post which can be considered equivalent to the post not below the rank of Senior and Junior Scientific Assistant, in Gujarat Ecological Education and Research (GEER) Foundation, after obtaining the educational qualification as prescribed in clause (ii) of sub rule (b) of rule 3 of this rule;

(c) possess the basic knowledge of computer application as prescribed in the Gujarat Civil Services Classification and Recruitment (General) Rules, 1967, and

(d) possess adequate knowledge of Gujarati or Hindi or both.

4. The candidate appointed by direct selection shall be on probation for a period of two years.
5. The candidate appointed by direct selection shall during his probation period, be required to pass the qualifying examination for computer knowledge in accordance with the provisions of the Gujarat Civil Services Computer competency (Training and Examination) Rules, 2006 or the examination for computer knowledge as may be prescribed by the Gujarat Ecological Education and Research (GEER) Foundation.
6. The candidate appointed by direct selection shall be required to pass an examination in Hindi or Gujarati or both in accordance with the rules as may be prescribed by the Gujarat Ecological Education and Research (GEER) Foundation.
7. The candidate appointed either by direct selection or by promotion shall have to undergo such training and to pass such examination as may be prescribed by the Gujarat Ecological Education and Research (GEER) Foundation.
8. The candidate appointed by direct selection will be required to furnish a security and surety bond in such form, for such amount and for such period as may be prescribed by the Gujarat Ecological Education and Research (GEER) Foundation.

By order and in the name of the Board of the Gujarat Ecological Education and Research (GEER) Foundation.

**R. D. KAMBOJ,**

Director

Gujarat Ecological Education and Research  
(GEER) Foundation.

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**Gujarat Ecological Education and Research  
(GEER) Foundation, Gandhinagar**

**Notification**

Dated the : 24<sup>th</sup> April, 2018.

**Rules of the Gujarat Ecological Education and Research (GEER) Foundation**

**No. EST/1/S.F.-62/817:-** In exercise of the powers conferred by the clause (x) of rule 20 of the Rules of the Gujarat Ecological Education and Research Foundation, the Board of the Gujarat Ecological Education and Research (GEER) Foundation hereby makes the following rules to provide for regulating recruitment to the post of Senior and Junior Scientific Assistant, in the Gujarat Ecological Education and Research (GEER) Foundation, namely:-

1. (a) These rules may be called the Senior and Junior Scientific Assistant, in the Gujarat Ecological Education and Research (GEER) Foundation Recruitment Rules, 2018.  
(b) They shall come into force at once.
2. Appointment to the post of Senior and Junior Scientific Assistant, in the Gujarat Ecological Education and Research (GEER) Foundation shall be made either:-
  - (a) by promotion of a person of proved merit and efficiency from amongst the persons who :
    - (i) have worked for not less than five years in the cadre of Technical Assistant, in the Gujarat Ecological Education and Research (GEER) Foundation, and
    - (ii) have passed the qualifying examination for computer knowledge in accordance with the provisions of the Gujarat Civil Services Computer Competency (Training and Examination) Rules, 2006 or the examination for computer knowledge as may be prescribed by the Gujarat Ecological Education and Research (GEER) Foundation.

Provided that where the appointing authority is satisfied that a person having the experience specified in sub clause (i) above is not available for promotion and that it is necessary in the public interest to fill up a post by promotion even of a person having experience for a lesser period; it may, for reasons to be recorded in writing, promote such person who possesses experience of a period of not less than two thirds of the period specified in sub clause (i) above with the approval of Government; or

(b) by direct selection.

3. The appointments by direct selection and promotion shall be made in the ratio of 2:1.

4. To be eligible for appointment by direct selection to the post mentioned in rule – 2, a candidate shall –

(a) not be less than 18 years and not be more than 38 years of age;

Provided that the upper age limit may be relaxed in favour of a candidate belonging to Scheduled Castes or Scheduled Tribes or Socially and Educationally Backward Classes or Economically Weaker Sections or Women in accordance with the provisions of the Gujarat Civil Services Classification and Recruitment (General) Rules, 1967.

(b) possess a post graduate degree in Environment Science or Chemistry or Bio-chemistry or Bio-technology or Micro-biology or Aquatic Biology or Marine Biology or Bio Science of any of the Universities established or incorporated by or under the Central or State Act in India or any other educational institution recognized as such or declared to be a deemed university under section 3 of the University Grants Commission Act, 1956;

(c) (i) have at least one year experience on the post not below the rank of Technical Assistant in Gujarat Ecological Education and Research (GEER) Foundation, or

(ii) have at least one year experience in different aspects of Laboratory Management including handling of advance instruments and work experience of analysis of Waste water or Molecular biology or Research and Development or Scientific Activities and Services or Science and Technology Programme and Planning Development in Government or Government undertaking Board or Corporation or Industrial or Academy or Science and Technology Organization on the post which can be considered equivalent to the post not below the rank of Technical Assistant, in Gujarat Ecological Education and Research (GEER) Foundation, after obtaining the educational qualification as prescribed in sub clause (b) of this rule.

(d) possess the basic knowledge of computer application as prescribed in the Gujarat Civil Services Classification and Recruitment (General) Rules, 1967, and

(e) possess adequate knowledge of Gujarati or Hindi or both.

5. Notwithstanding anything contained in any rules, a candidate selected by direct recruitment shall be appointed on contract basis for five years on such terms and conditions as prescribed by the Gujarat Ecological Education and Research (GEER) Foundation.

6. The candidate appointed under rule 5 shall be given the prescribed pay scale of the post of Senior and Junior Scientific Assistant, after completion of contractual period, on his performance being found satisfactory during the stipulated period of service on contract basis.

7. The candidate appointed under rule 5, shall during the stipulated period of service on contractual basis, be required to pass the CCC examination for computer knowledge as prescribed in the Gujarat Civil Services Computer Competency (Training and Examination) Rules, 2006 or the examination for computer knowledge as may be prescribed by the Gujarat Ecological Education and Research (GEER) Foundation.

8. The candidate appointed in accordance with rule-5 shall, after regular appointment, be required to pass an examination of Hindi or Gujarati or both, as the case may be, in accordance with the rules as may be prescribed by the Gujarat Ecological Education and Research (GEER) Foundation.
9. The candidate appointed either by promotion or by direct selection shall have to undergo such training and to pass such examination as may be prescribed by the Gujarat Ecological Education and Research (GEER) Foundation.
10. The candidate appointed by direct selection shall be required to furnish a security and surety bond in such form, for such amount and for such period as may be prescribed by the Gujarat Ecological Education and Research (GEER) Foundation.

By order and in the name of the Board of the Gujarat Ecological Education and Research (GEER) Foundation.

**R. D. KAMBOJ,**

Director

Gujarat Ecological Education and Research  
(GEER) Foundation.

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**Gujarat Ecological Education and Research**  
**(GEER) Foundation, Gandhinagar**  
**Notification**

Dated the : 24<sup>th</sup> April, 2018.

**Rules of the Gujarat Ecological Education and Research (GEER) Foundation**

**No. EST/1/S.F.-62/818:-** In exercise of the powers conferred by the clause (x) of rule 20 of the Rules of the Gujarat Ecological Education and Research Foundation, the Board of the Gujarat Ecological Education and Research (GEER) Foundation hereby makes the following rules to provide for regulating recruitment to the post of Technical Assistant, in the Gujarat Ecological Education and Research (GEER) Foundation, namely:-

1. (a) These rules may be called the Technical Assistant, in the Gujarat Ecological Education and Research (GEER) Foundation Recruitment Rules, 2018.  
(b) They shall come into force at once.
2. Appointment to the post of Technical Assistant, in the Gujarat Ecological Education and Research (GEER) Foundation shall be made by direct selection.
3. To be eligible for appointment by direct selection to the post mentioned in rule – 2, a candidate shall –
  - (a) not be less than 18 years and not be more than 36 years of age;

Provided that the upper age limit may be relaxed in favour of a candidate belonging to Scheduled Castes or Scheduled Tribes or Socially and Educationally Backward Classes or Economically Weaker Sections or Women in accordance with the provisions of the Gujarat Civil Services Classification and Recruitment (General) Rules, 1967.

- (b) possess a graduate degree in Environment Science or Chemistry or Bio-chemistry or Bio-technology or Micro-biology or Aquatic Biology or Marine Biology or Bio Science of any of the Universities established or incorporated by or under the Central or State Act in India or any other educational institution recognized as such or declared to be a deemed university under section 3 of the University Grants Commission Act, 1956;

- (c) have at least one year experience in different aspects of Laboratory Management including handling of advance instruments and work experience of analysis of Waste water or Molecular biology or Research and Development or Scientific Activities and Services or Science and Technology Programme and Planning Development in Government or Government undertaking Board or Corporation or Industrial or Academy or Science and Technology Organization.
  - (d) possess the basic knowledge of computer application as prescribed in the Gujarat Civil Services Classification and Recruitment (General) Rules, 1967, and
  - (e) possess adequate knowledge of Gujarati or Hindi or both.
4. Notwithstanding anything contained in any rules, a candidate selected by direct recruitment shall be appointed on contract basis for five years on such terms and conditions as prescribed by the Gujarat Ecological Education and Research (GEER) Foundation.
  5. The candidate appointed under rule 4 shall be given the prescribed pay scale of the post of Technical Assistant, after completion of contractual period, on his performance being found satisfactory during the stipulated period of service on contract basis.
  6. The candidate appointed under rule 4, shall during the stipulated period of service on contractual basis, be required to pass the CCC examination for computer knowledge as prescribed in the Gujarat Civil Services Computer Competency (Training and Examination) Rules, 2006 or the examination for computer knowledge as may be prescribed by the Gujarat Ecological Education and Research (GEER) Foundation.
  7. The candidate appointed in accordance with rule-4 shall, after regular appointment, be required to pass an examination of Hindi or Gujarati or both, as the case may be, in accordance with the rules as may be prescribed by the Gujarat Ecological Education and Research (GEER) Foundation.
  8. The candidate appointed by direct selection shall have to undergo such training and to pass such examination as may be prescribed by the Gujarat Ecological Education and Research (GEER) Foundation.
  9. The candidate appointed by direct selection shall be required to furnish a security and surety bond in such form, for such amount and for such period as may be prescribed by the Gujarat Ecological Education and Research (GEER) Foundation.

By order and in the name of the Board of the Gujarat Ecological Education and Research (GEER) Foundation.

**R. D. KAMBOJ,**

Director

Gujarat Ecological Education and Research  
(GEER) Foundation.

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### PART IV-A

Rule and Orders (Other than those published in Parts I, I-A, and I-L) made  
by the Government of Gujarat under the Central Acts

### GENERAL ADMINISTRATION DEPARTMENT

#### Notification

Sachivalaya, Gandhinagar, 2<sup>nd</sup> May, 2018

**No. GS/14/VHS-102018-139-RTI CELL.**— In exercise of the powers conferred under sub section (4) of section 16 of the Right to Information Act, 2005, the Governor of Gujarat hereby accepts the resignation tendered by Shri Dilip P. Thaker as the State Information Commissioner in the Gujarat Information Commission with immediate effect.

By order and in the name of the Governor of Gujarat,

**C. M. SADADIYA,**

Joint Secretary to Government.

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### PART IV-A

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#### GENERAL ADMINISTRATION DEPARTMENT

#### Notification

Sachivalaya, Gandhinagar, 2<sup>nd</sup> May, 2018

**No. GS/15/VHS-102018-139-RTI CELL.**— In exercise of the powers conferred under sub section (3) of section 15 of the Right to Information Act, 2005, the Governor of Gujarat hereby appoint Shri D. P. Thaker as the State Chief Information Commissioner in the Gujarat Information Commissioner with effect from the date he assumes charge of that office. The orders regarding the terms and conditions of his appointment as the State Chief Information Commissioner will be issued separately.

By order and in the name of the Governor of Gujarat,

**C. M. SADADIYA,**

Joint Secretary to Government.

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### PART IV-A

Rules and Orders (Other than those published in Parts I, I-A, and I-L) made  
by the Government of Gujarat under the Central Acts

#### FOOD, CIVIL SUPPLIES AND CONSUMER AFFAIRS DEPARTMENT

##### Notification

Sachivalaya, Gandhinagar, 27<sup>th</sup> April, 2018.

#### CONSUMER PROTECTION ACT, 1986

**No.GTH/2018/05/CPA/102018/95724/D:-** In exercise of the powers conferred by clause (a) of section 9 read with sub-section (1) (a), 1(A) and 2 of section-10 of the Consumer Protection Act, 1986 as amended in 1993 and 2002, Government of Gujarat hereby re-appoints Shri M.S.Bhatt, retired Additional District Judge, Anand as the President, District Consumer Disputes Redressal Forum, Kheda with headquarter at Kheda.

Shri M.S.Bhatt shall hold his office for a period of five years from the day he resumes the charge of his office or up to the age of 65 years whichever is earlier.

The Terms and conditions for the above appointment is applicable as decided in the notification No.GTH/2015/2/CPA/10/2013/489863/D dated 15/1/2015.

By order and in the name of the Governor of Gujarat,

**P.N.Mehta,**

Section Officer

Food, Civil Supplies & Consumer Affairs Department.

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#### FOOD, CIVIL SUPPLIES AND CONSUMER AFFAIRS DEPARTMENT

##### Notification

Sachivalaya, Gandhinagar, 27<sup>th</sup> April, 2018.

#### CONSUMER PROTECTION ACT, 1986

**No.GTH/2018/06/CPA/102018/95724/D:-** In exercise of the powers conferred by clause (a) of section 9 read with sub-section (1) (a), 1(A) and 2 of section-10 of the Consumer Protection Act, 1986 as amended in 1993 and 2002, Government of Gujarat hereby re-appoints Shri

K.B.Maghnani,retired Principle District Judge, Mahisagar as the President, District Consumer Disputes Redressal Forum, Sabarkantha with headquarter at Himatnagar.

Shri K.B.Maghnani shall hold his office for a period of five years from the day he resumes the charge of his office or up to the age of 65 years whichever is earlier.

The Terms and conditions for the above appointment is applicable as decided in the notification No.GTH/2015/2/CPA/10/2013/489863/D dated 15/1/2015.

By order and in the name of the Governor of Gujarat,

**P.N.Mehta,**

Section Officer

Food, Civil Supplies & Consumer Affairs Department.

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**FOOD, CIVIL SUPPLIES AND CONSUMER AFFAIRS DEPARTMENT**

**Notification**

Sachivalaya, Gandhinagar, 27<sup>th</sup> April, 2018.

**CONSUMER PROTECTION ACT, 1986**

**No.GTH/2018/07/CPA/102018/95724/D:-** In exercise of the powers conferred by clause (a) of section 9 read with sub-section (1) (a), 1(A) and 2 of section-10 of the Consumer Protection Act, 1986 as amended in 1993 and 2002, Government of Gujarat hereby re-appoints Mrs. D.Y.Patel, retired Principle Judge, Family Court, Mehsana as the President, District Consumer Disputes Redressal Forum, Bharuch with headquarter at Bharuch.

Mrs. D.Y.Patelshall hold his office for a period of two years from the day he resumes the charge of his office.

The Terms and conditions for the above appointment is applicable as decided in the notification No.GTH/2015/2/CPA/10/2013/489863/D dated 15/1/2015.

By order and in the name of the Governor of Gujarat,

**P.N.Mehta,**

Section Officer

Food, Civil Supplies & Consumer Affairs Department.

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**FOOD, CIVIL SUPPLIES AND CONSUMER AFFAIRS DEPARTMENT**

**Notification**

Sachivalaya, Gandhinagar, 27<sup>th</sup> April, 2018.

**CONSUMER PROTECTION ACT, 1986**

**No.GTH/2018/08/CPA/102018/95724/D:-** In exercise of the powers conferred by clause (a) of section 9 read with sub-section (1) (a), 1(A) and 2 of section-10 of the Consumer Protection Act, 1986 as amended in 1993 and 2002, Government of Gujarat hereby transfers Mr. J.N.Brahmbhatt, President, District Consumer Disputes Redressal Forum, Bharuch toDistrict Consumer Disputes Redressal Forum, Vadodara(Addi.) with immediate effect with headquarter at Vadodara.

Transfer Allowance would not be admissible.

By order and in the name of the Governor of Gujarat,

**P.N.Mehta,**

Section Officer

Food, Civil Supplies & Consumer Affairs Department.

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### PART IV-A

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#### FOREST AND ENVIRONMENT DEPARTMENT

#### Notification

Sachivalaya, Gandhinagar, 1<sup>st</sup> May, 2018

#### CONSTITUTION OF INDIA.

**No. GVN/2018/2/CRR/102016/ 16/D:** In exercise of the powers conferred by the proviso to article 309 of the Constitution of India and in supersession of all the existing rules made in this behalf, the Governor of Gujarat hereby makes the following rules to provide for regulating recruitment to the post of Deputy Conservator of Forest, Class-I, in the Gujarat Forest Service, namely:-

1. These rules may be called the Deputy Conservator of Forest, Class-I, Recruitment Rules, 2018.
2. Appointment to the post of Deputy Conservator of Forest, Class-I, in the Gujarat Forest Service, shall be made by promotion of a person of proved merit and efficiency from amongst the persons, who,-
  - (i) have worked for not less than eight years (including training period in the Forest College) in the cadre of Assistant Conservator of Forest, Class-II, in the Gujarat Forest Service;
  - (ii) have passed the qualifying examination for computer knowledge in accordance with the provisions of the Gujarat Civil Services Computer Competency Training and Examination Rules, 2006:

Provided that, where the appointing authority is satisfied that a person having an experience specified in sub-clause (i) above is not available for promotion and that it is necessary in the public interest to fill up the post by promotion even of a person having experience for a lesser period; it may, for reasons to be recorded in writing, promote such person who possesses experience of a period of not less than two-thirds of the period specified in sub-clause (i) above.

By order and in the name of the Governor of Gujarat,

**GAGUBHA RAJ,**  
Under Secretary to Government.



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#### FOOD, CIVIL SUPPLIES AND CONSUMER AFFAIRS DEPARTMENT

#### Notification

Sachivalaya, Gandhinagar, 3<sup>rd</sup> May, 2018

#### CONSUMER PROTECTION ACT, 1986

**No. GTH/2018/10/CPA/102018/199606/D:**— In exercise of the powers conferred by clause (a) of section 9 read with sub-section I (B). 2 and 3 of section-16 of the Consumer Protection Act. 1986 as amended in 1993 and 2002. Government of Gujarat appoints the following member to Consumer Disputes Redressal Commission.

| Sr. No. | Name Of Member   | Place of Appointment and Head Quarter (Consumer Dispute Redressal Commission) | Current Term expires on | Tenure   |
|---------|------------------|---|-------------------------|--|
| (1)     | (2)              | (3)   |                         | (4)  |
| 1       | Dr. J. G. Mecwan | CDRC, Ahmedabad   | 30.11.2018              | Up to 30.11.2021 or attaining age of 67years. Whichever is earlier |

Terms and conditions for the above appointment is as below:-

(1) The terms and conditions shall be applicable as decided in the G.R. No: CPA/1098/2860/D, dated 30/11/2004, G.R. NO: CPA/1098/2860/D, dated 15/2/2006 and 7/8/2006 and Notification No:GTH/2014/38/CPA/102013/480323/D dated 1/12/2014 issued by the State Government.

(2) In case the candidate recommended for appointment is an advocate, then he should invariably deposit the 'Sanad' with the Bar Council and the same will lie deposited with the Bar Council so long as the candidate holds the post of the Member of the Commission.

- (3) He should perform her duties as Member of the Commission efficiently, honestly and with full ability and integrity.
- (4) He shall work full lime in the Commission only.
- (5) If the performance of a member is found to be poor/unsatisfactory, the appointment shall be liable for termination.
- (6) The appointment of Member of the commission shall be up to 30.11.2021 or till the age of 67 years, whichever is earlier.

By order and in the name of the Governor of Gujarat,

**P. N. MEHTA,**

Section Officer,

Food, Civil Supplies & Consumer Affairs Department.

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**FOOD, CIVIL SUPPLIES AND CONSUMER AFFAIRS DEPARTMENT**

#### Notification

Sachivalaya, Gandhinagar, 3<sup>rd</sup> May, 2018

#### CONSUMER PROTECTION ACT, 1986

**No. GTH/2018/11/CPA/102018/199606/D:—** In exercise of the powers conferred by clause (b) of section 9 and clause 1(b) and (2) of section-16 of the Consumer Protection Act, 1986 as amended in 1993 and 2002, Government of Gujarat hereby appoints following retired Judges as Judicial Members of the State Consumer Disputes Redressal Commission, Ahmedabad with headquarters at Ahmedabad.

| Sr. No. | Name of Judicial Officer | Recommended for appointment as Presiding Member of | Remarks  |
|---------|--------------------------|--|--|
| 1       | 2                        | 3  | 4  |
| 1       | Shri R. M. Parmar        | <b>Bench No. 2</b>                                 | Upon expiry of the tenure of Shri V. M. Chaudhary, Presiding Member, Bench No. 2 on 31.05.2018 |
| 2       | Shri A. S. Budhwani      | <b>Bench No. 3</b>                                 | —  |
| 3       | Shri V.K. Shah           | <b>Bench No. 4</b>                                 | —  |

The appointment of retired judicial Officials as Presiding Members for a period of 2 years or the age of 67 years, whichever is earlier.

The terms and conditions shall be applicable as decided in the Gujarat Consumer Protection Rules, 1988 amended by time to time and Notification No. GTH/2015/30/CPA/102013/480323/D dated 22/12/2015.

By order and in the name of the Governor of Gujarat,

**P. N. MEHTA,**  
Section Officer,

Food, Civil Supplies & Consumer Affairs Department.



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#### FOOD, CIVIL SUPPLIES AND CONSUMER AFFAIRS DEPARTMENT

#### Notification

Sachivalaya, Gandhinagar, 3<sup>rd</sup> May, 2018

#### CONSUMER PROTECTION ACT, 1986

**No. GTH/2018/12/CPA/102018/199606/D:—** In exercise of the powers conferred by clause (a) of section 9 read with sub-section (1) (a), 1 (A) and (2) of section-10 of the Consumer Protection Act, 1986 as amended in 1993 and 2002, Government of Gujarat appoints the following members to District Consumer Disputes Redressal Forum.

| Sr. No. | Name Of Member        | Place of Appointment and Head Quarter (Consumer Dispute Redressal Commission) | Current Term expires on | Tenure   |
|---------|-----------------------|---|-------------------------|--|
| (1)     | (2)                   | (3)   |                         | (4)  |
| 1       | Smt. S. R. Patel      | CDRF, Sabarkantha   | 31.07.2018              | For 1 year from the expiry of current term   |
| 2       | Ms. P. T. Parmar      | CDRF, Valsad  | 24.08.2018              | For 1 year from the expiry of current term   |
| 3       | Shri D. D. Barad      | CDRF, Kheda   | 27.07.2018              | For 1 year from the expiry of current term   |
| 4       | Smt. Archnaben Pandya | CDRF, Surendranagar   | 29.07.2018              | For 1 year from the expiry of current term   |
| 5       | Shri A. A. Yogi       | CDRF, Junauadh  | 28.09.2018              | For 1 year from the expiry of current term or the age of 65 years, whichever is earlier. |

Terms and conditions for the above appointment is as below:-

- (1) The terms and conditions shall be applicable as decided in the G.R. No: CPA/ 1098/2860/D. dated 30/11/2064. G.R. NO: CPA/1098/2860/D. dated 15/2/ 2006 and 7/8/ 2006 and Notification No: OTH/2014/38/CPA/1020I3/480323/D dated 1/12/2014 issued by the State Government.
- (2) In case the candidate recommended for appointment is an advocate, then he/she should invariably deposit the 'Sanad" with the Bar Council and the same will lie deposited with the Bar Council so long as the candidate holds the post of the Member of the District Forum.
- (3) He/She should perform his/her duties as Member of the Forum efficiently, honestly and with,full ability and integrity.
- (4) He/She shall work full time in the Forum only.
- (5) If the performance of a member is found to be poor/unsatisfactory, the appointment shall be liable for termination.

By order and in the name of the Governor of Gujarat,

**P. N. MEHTA,**

Section Officer,

Food, Civil Supplies & Consumer Affairs Department.

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#### FOOD, CIVIL SUPPLIES AND CONSUMER AFFAIRS DEPARTMENT

##### Notification

Sachivalaya, Gandhinagar, 10<sup>th</sup> May, 2018

#### NATIUNAL FOOD SECURITY ACT, 2013.

**No. GTH/2018/14/PDS/102018/175/C-1** :- WHEREAS in exercise of the powers conferred by sub-section (3) of section 16 of the National Food Security Act, 2013 (20 of 2013) (hereinafter referred to as the "said Act"), Shri Bhupendra Lakhawala was appointed as Chairperson of the State Food Commission vide Government Notification, Food, Civil Supplies and Consumer Affairs Department No. GTH/2017/12/PDS/102017/92282/C-1, dated the 13<sup>th</sup> April, 2017 ;

AND WHEREAS Shri Bhupendra Lakhawala, Chairperson, State Food Commission has attained the age of sixty-five years on 5<sup>th</sup> April, 2018 and ceases as Chairperson under the proviso to sub-section (4) of section 16 of the said Act ;

NOW THEREFORE, in exercise of the powers conferred by sub-section (3) of section 16 of the said Act, the Government of Gujarat hereby notifies that the charge of the Chairperson of the State Food Commission will be held by Smt. Sangeeta Singh, I.A.S. Additional Chief Secretary, Food, Civil Supplies and Consumer Affairs Department as additional charge.

By order and in the name of the Governor of Gujarat,

**MUKESH K. PANDIT,**  
Under Secretary to Government.

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by the Government of Gujarat under the Central Acts**

#### HOME DEPARTMENT

##### Notification

Sachivalaya, Gandhinagar, 8<sup>th</sup> May, 2018.

- Read: 1. Government Home Department's Notification  
No.GG/52/2006/1094/GOI-1/(Part-II)N, dated 12<sup>th</sup> July, 2006.
2. Hon'ble Governor of Gujarat, Raj Bhavan, Gandhinagar's Warrant  
dated 7<sup>th</sup> May, 2018.

#### **APPOINTMENT OF CHAIRPERSON OF GUJARAT STATE HUMAN RIGHTS COMMISSION.**

**No. GG/33/GHR/102018/319/HR:-**

Government of Gujarat has constituted State Human Rights Commission vide Notification dated 12<sup>th</sup> July, 2006, under section -21 of the Protection of Human Rights Act, 1993 Hon'ble Governor of Gujarat has approved the appointment of Chairperson of this Commission by warrant dated 7<sup>th</sup> May, 2018 of Hon. Justice (Rtd.) Smt. Abhilashakumariji, Former Chief Justice of High Court of Manipur, as a chairperson of the Gujarat Human Rights Commission by virtue of powers vested in under Section -22 of the Protection of Human Rights Act, 1993, for a period of five years or up to the age of attaining 70 years by Hon. Justice (Rtd.) Smt. Abhilashakumariji whichever is earlier with effect from the date she assumes the charge of her office.

By order and in the name of the Governor of Gujarat,

**M. S. DAGUR,**  
Additional Chief Secretary to  
Government.

**HOME DEPARTMENT****Notification**

Sachivalaya, Gandhinagar, 8<sup>th</sup> May, 2018.

- Read: 1. Government Home Department's Notification  
No.GG/52/2006/1094/GOI-1/(Part-II)N, dated 12<sup>th</sup> July, 2006.
2. Hon'ble Governor of Gujarat, Raj Bhavan, Gandhinagar's Warrant  
dated 7<sup>th</sup> May, 2018.

**APPOINTMENT OF MEMBER OF GUJARAT STATE HUMAN RIGHTS COMMISSION.**

**No. GG/34/GHR/102018/319/HR:-**

Government of Gujarat has constituted State Human Rights Commission vide Notification dated 12<sup>th</sup> July, 2006, under section -21 of the Protection of Human Rights Act, 1993. Hon'ble Governor of Gujarat has approved the appointment of Member of this Commission by warrant dated 7<sup>th</sup> May, 2018 of Hon. Justice (Rtd.) Shri Mahendrabhai H.Shah, Former Principal District and Sessions Judge, Navsari, as a Member of the Gujarat State Human Rights Commission by virtue of powers vested in under Section -22 and 24(2) of the Protection of Human Rights Act, 1993, for a period of five years or up to the age of attaining 70 years by Hon. Justice (Rtd.) Shri Mahendrabhai H. Shah whichever is earlier with effect from the date he assumes the charge of his office.

By order and in the name of the Governor of Gujarat,

**M. S. DAGUR,**  
Additional Chief Secretary to  
Government.

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by the Government of Gujarat under the Central Acts

#### FOOD, CIVIL SUPPLIES AND CONSUMER AFFAIRS DEPARTMENT

##### Notification

Sachivalaya, Gandhinagar, 1<sup>st</sup> May, 2018

##### CONSUMER PROTECTION ACT, 1986.

**No. GTH/2018/09/CPA/102018/167589/D :-** In exercise of the powers conferred by clause (a) of section 9 read with sub-section (1) (a), 1(A) and 2 of section-10 of the Consumer Protection Act, 1986 as amended in 1993 and 2002, Government of Gujarat hereby accepts the resignation of Mr. P.O.Lad, Judicial Member, State Consumer Disputes Redressal Commission, Ahmedabad with effect from 31/03/2018 (A.O.H.)

By order and in the name of the Governor of Gujarat,

**P. N. MEHTA,**

Section Officer,

Food, Civil Supplies & Consumer Affairs Department.

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by the Government of Gujarat under the Central Acts**

#### FOOD, CIVIL SUPPLIES AND CONSUMER AFFAIRS DEPARTMENT

#### Notification

Sachivalaya, Gandhinagar, 14<sup>th</sup> May, 2018

#### NATIONAL FOOD SECURITY ACT, 2013.

**No. GTH/2018/15/PDS/102017/437/C-1:-** The following draft of rules which is proposed to be issued under clause (j) of sub-section (2) of section 40 read with sub-section (1) of section 28 of the National Food Security Act, 2013 (20 of 2013) is hereby published as required by sub-section (1) of the said section 40 of the afore said Act, for information of all persons likely to be affected thereby and notice is hereby given that the said draft rules will be taken into consideration by the Government of Gujarat on or after the expiry of thirty days from the date of publication of this notification in the *Official Gazette*.

2. Any objection or suggestion which may be received by the Additional Chief Secretary to the Government of Gujarat, Food, Civil Supplies and Consumer Affairs Department, Block No.14, 5<sup>th</sup> Floor, Sachivalaya, Gandhinagar - 382 010 from any person with respect to the said draft rules on or before the expiry of the aforesaid period will be considered by the Government.

#### DRAFT NOTIFICATION

No. GTH/2018/15/PDS/102017/437/632656/C-1 : In exercise of the powers conferred by clause (j) of sub-section (2) of section 40 read with sub-section (1) of section 28 of the National Food Security Act, 2013 (20 of 2013), the Government of Gujarat hereby makes the following rules, namely :-

**1. Short title and commencement.-**(1) These rules may be called the Gujarat Social Audit(Fair Price Shops and Targeted Public Distribution System) Rules, 2018.

(2) They shall come into force on the date of their publication in the Official Gazette.

**2. Definitions.**-(1) In these rules, unless the context otherwise requires, -

(a) “Act” means the National Food Security Act, 2013 (20 of 2013);

(b) "Commission" means the Gujarat State Food Commission;

(c) “Government” means the Government of Gujarat;

(d) “Gram Sabha” means gram sabha as defined under clause (33) of section 2 of the Gujarat Panchayats Act, 1993;

(e) “Ordinary General Meetings of Municipality” means meetings as provided under section 51 of the Gujarat Municipalities Act, 1963;

(f) “Section” means section of the Act;

(g) “Wards committee” means wards committee constituted under section 29A of the Gujarat Provincial Municipal Corporations Act, 1949.

(2) Words and expressions used in these rules but not defined shall have the same meaning respectively assigned to them in the Act.

**3. Social Audit.-**

In order to ensure transparency in the implementation of Targeted Public Distribution System, the State Government shall make available all records to the general public. Following shall be the process for Social Audit:-

(1) A simple and common format/questionnaires shall be devised by Director, Food and Civil Supplies which shall be provided to all participants of the concerned Gram Sabha, Ordinary General Meetings of Municipality/Wards committee, as the case may be, so that people can opine their views/grievances/suggestions on the following parameters:-

- (i) Public display of the entire list of eligible households under National Food Security Act, 2013;
- (ii) Updation in the list of beneficiaries;
- (iii) Timely availability of adequate stock of foodgrains in the fair price shop;
- (iv) Timely distribution of foodgrains by the concerned fair price shop dealer;
- (v) Distribution of foodgrains to eligible households as per their entitlement under the Act;
- (vi) Distribution of foodgrains to the eligible households at prices specified under the Act;
- (vii) Regular and timely opening and closing of fair price shops;

- (viii) Awareness about grievance redressal mechanism and their effectiveness in redressal of grievances;
  - (ix) Use of technology in beneficiaries authentication and proper targeting; and
  - (x) Any other parameters shall be included by the Collector as per the local situation of the City, Gram, Taluka, District levels.
- (2) All records related to allotment, permit register, sale register, stock register, storage and distribution of essential commodities under the Targeted Public Distribution System at Fair Price Shops shall be placed at Gram Sabha, Ordinary General Meetings of Municipality or as the case may be, Wards committee held at least once in six months for social audit.
- (3) In rural areas, documents of intervening period between the Gram Sabhas as specified in sub rule(2) above shall be placed in Gram Sabha by Fair Price Shop owner and Supply Inspector in-charge for social audit.
- (4) After audit of documents at Gram Sabha, the report along with recommendation shall be submitted to village level vigilance committee for examination. Then village level vigilance committee shall submit its reports to Taluka level vigilance committee. After examination by Taluka level vigilance committee, recommendation shall be forwarded to District level vigilance committee for further necessary action.
- (5) (a) In urban areas, the Municipal Corporation shall facilitate convening of meeting of Wards committee and in Municipalities, the urban local body shall facilitate convening of meeting of Ordinary General Meetings of Municipality with agenda for conduct of social audit on the date fixed.
- (b) In the meeting convened as per above clause (a), documents of intervening period between the Ordinary General Meetings of Municipality, Wards Committee as specified in the sub rule (2) shall be placed in the Ordinary General Meetings of Municipality, Wards Committee as the case may be, by Fair Price Shop owners and designated Supply Officer/Supply Inspector in-charge of the social audit.
- (6) After audit of documents at meeting of Ordinary General Meeting of Municipality, Wards Committee in urban areas, the report along with recommendation shall be submitted to the City level vigilance committee. After examination by the City level vigilance committee, recommendation shall be forwarded to District level vigilance committee for further necessary action.
- (7) After compiling the social audit report of Fair Price Shops, necessary examination shall be made at district level and District Collector shall take further necessary

action. Action taken on the social audit report shall be forwarded to Director, Food and Civil Supplies.

(8) Director, Food and Civil Supplies shall monitor and take actions on the social audit report and shall report to the Government and the Commission.

(9) The concerned District Collector shall publish the reports of the Social audit and action taken thereon, including placing the same on the PDS transparency portal.

4. The Director, Food and Civil Supplies shall devise online mechanism for social audit as early as possible.

By order and in the name of the Governor of Gujarat,

**(Sd/-) Illegible,**

Under Secretary to Government.

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सत्यमेव जयते

# The Gujarat Government Gazette

## EXTRAORDINARY

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Separate paging is given to this Part in order that it may be filed as a Separate Compilation.

### PART IV-A

Rule and Orders (Other than those published in Parts I, I-A, and I-L) made  
by the Government of Gujarat under the Central Acts

#### GENERAL ADMINISTRATION DEPARTMENT

#### Notification

Sachivalaya, Gandhinagar, 15<sup>th</sup> May, 2018

**No. GS/19/VHS-102018-676-RTI CELL.**— In exercise of the powers conferred under sub section (4) of section 16 of the Right to Information Act, 2005, the Governor of Gujarat hereby accepts the resignation tendered by Shri H.V. Patel, Retired IAS, as the State Information Commissioner in the Gujarat Information Commission with effect from 30-04-2018 (A.N.).

By order and in the name of the Governor of Gujarat,

**C. M. SADADIYA,**

Joint Secretary to Government.

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# The Gujarat Government Gazette

## EXTRAORDINARY

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### PART IV-A

Rule and Orders (Other than those published in Parts I, I-A, and I-L) made  
by the Government of Gujarat under the Central Acts

#### HEALTH AND FAMILY WELFARE DEPARTMENT

##### Notification

Sachivalaya, Gandhinagar, 9<sup>th</sup> May, 2018

##### Medical Termination of Pregnancy Act-1971.

**No.GP-62-FPW-102017-741/B.1:**— In exercise of the powers conferred by clause (b) of section 4 of the Medical Termination of Pregnancy Act, 1971 (34 of 1971) and in supersession of Government Notification, Health and Family Welfare Department, No.GP-42-FPW-102000-GOI-45/GH, dated the 16<sup>th</sup> February, 2004, the Government of Gujarat hereby constitutes the District Level Committee comprising of the following members namely :-

| Sr. No. | Details of Member   | Designation      |
|---------|---|------------------|
| 1       | 2   | 3                |
| 1.      | CDMO/Medical Superintendent/ Superintendent of Hospitals, as mentioned in Schedule-I, appended hereto                 | Chairparson      |
| 2.      | Full time Gynecologist, Class-I of the District Hospital/ G.M.E.R.S. General Hospital                                 | Member           |
| 3.      | Person from local medical profession/non Government Organization/Panchayati Raj Institution of the concerned District | Member           |
| 4.      | DHO/A.D.H.O. of the District as mentioned in Schedule-II appended hereto  | Member Secretary |

By order and in the name of the Governor of Gujarat,

**A. J. BHADSHIA,**

Under Secretary to Government.

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**SCHEDULE-I****CHAIRPERSON OF THE DISTRICT LEVEL COMMITTEE**

| <b>Sr. No.</b> | <b>Name of District</b> | <b>Chairperson of the Committee</b>   |
|----------------|-------------------------|---|
| <b>1</b>       | <b>2</b>                | <b>3</b>  |
| 1              | Ahmedabad               | Medical Superintendent,<br>GMERS Civil Hospital, Sola- Ahmedabad                      |
| 2              | Amreli                  | Chief District Medical officer cum Civil Surgeon, General<br>Hospital, Amreli         |
| 3              | Anand                   | Chief District Medical officer cum Civil Surgeon, General<br>Hospital, Petlad         |
| 4              | Arvali                  | Medical Superintendent,<br>GMERS General Hospital, Himmatnagar.                       |
| 5              | Banaskantha             | Chief District Medical officer cum Civil Surgeon, General<br>Hospital, Palanpur       |
| 6              | Bharuch                 | Chief District Medical officer cum Surgeon,<br>General Hospital, Bharuch              |
| 7              | Bhavnagar               | Medical Superintendent, Sir T Hospital, Bhavnagar.                                    |
| 8              | Botad                   | Superintendent, General Hospital, Botad.  |
| 9              | Chhotaudepur            | Superintendent,<br>General Hospital, Chhotaudepur                                     |
| 10             | Dahod                   | Chief District Medical officer cum Civil Surgeon, General<br>Hospital, Dahod.         |
| 11             | Devbhumi Dwarka         | Superintendent, General Hospital, Jamkhambhaliya                                      |
| 12             | Gandhinagar             | Medical Superintendent,<br>GMERS General Hospital, Gandhinagar                        |
| 13             | Gir Somnath             | Superintendent, General Hospital, Veraval   |
| 14             | Jamnagar                | Medical Superintendent, G. G. Hospital, Jamnagar                                      |
| 15             | Junagadh                | Medical Superintendent,<br>GMERS General Hospital, Junagadh                           |
| 16             | Kuttch                  | Chief District Medical officer cum Civil Surgeon, (ADANI)<br>General Hospital, Bhuj   |
| 17             | Kheda                   | Superintendent, General Hospital, Nadiad  |
| 18             | Mahesana                | Chief District Medical officer cum Civil Surgeon, General<br>Hospital, Mahesana       |
| 19             | Mahisagar               | Superintendent,<br>General Hospital, Lunavada   |
| 20             | Morbi                   | Superintendent, General Hospital, Morbi   |
| 21             | Narmada                 | Chief District Medical officer cum Civil Surgeon, General<br>Hospital, Rajpipla       |
| 22             | Navsari                 | Chief District Medical officer cum Civil Surgeon, General<br>Hospital, Navsari.       |
| 24             | Patan                   | Medical Superintendent,<br>GMERS General Hospital, Dharpur-Patan.                     |
| 25             | Porbandar               | Chief District Medical officer cum Civil Surgeon, General<br>Hospital, Porbandar      |
| 26             | Rajkot                  | Superintendent,<br>P. K. General Hospital Rajkot                                      |
| 27             | Sabarkantha             | Medical Superintendent,<br>GMERS General Hospital, Himmatnagar.                       |
| 28             | Surat                   | Medical Superintendent, New Civil Hospital, Surat.                                    |
| 29             | Surendranagar           | Chief District Medical officer cum Civil Surgeon, General<br>Hospital, Surendranagar. |
| 30             | Tapi                    | Chief District Medical officer cum Civil Surgeon, General<br>Hospital, Vyara          |
| 31             | Dang                    | Superintendent, General Hospital, Ahwa  |

| <b>Sr. No.</b> | <b>Name of District</b> | <b>Chairperson of the Committee</b>  |
|----------------|-------------------------|--|
| <b>1</b>       | <b>2</b>                | <b>3</b>   |
| 32             | Vadodara                | Chief District Medical officer cum Civil Surgeon, Jamnabai General Hospital, Vadodara. |
| 33             | Valsad                  | Medical Superintendent. GMERS General Hospital, Valsad.                                |

By order and in the name of the Governor of Gujarat,

**A. J. BHADSHIA,**  
Under Secretary to Government.

-----  
**SCHEDULE-II**

**MEMBER-SECRETARY OF THE DISTRICT LEVEL COMMITTEE**

| <b>Sr.No.</b> | <b>Name of District</b> | <b>Member Secretary of the Committee</b> |
|---------------|-------------------------|--|
| <b>1</b>      | <b>2</b>                | <b>3</b>                                 |
| 1             | Ahmedabad               | Additional District Health Officer       |
| 2             | Amreli                  | Additional District Health Officer       |
| 3             | Anand                   | Additional District Health Officer       |
| 4             | Arvali                  | Additional District Health Officer       |
| 5             | Banaskantha             | Additional District Health Officer       |
| 6             | Bharuch                 | Additional District Health Officer       |
| 7             | Bhavnagar               | Additional District Health Officer       |
| 8             | Botad                   | Additional District Health Officer       |
| 9             | Chhotaudepur            | Additional District Health Officer       |
| 10            | Dahod                   | Additional District Health Officer       |
| 11            | Devbhumi Dwarka         | Additional District Health Officer       |
| 12            | Gandhinagar             | Additional District Health Officer       |
| 13            | Gir Somnath             | Additional District Health Officer       |
| 14            | Jamnagar                | Additional District Health Officer       |
| 15            | Junagadh                | Additional District Health Officer       |
| 16            | Kuttch                  | Additional District Health Officer       |
| 17            | Kheda                   | Additional District Health Officer       |
| 18            | Mahesana                | Additional District Health Officer       |
| 19            | Mahisagar               | Additional District Health Officer       |
| 20            | Morbi                   | Additional District Health Officer       |
| 21            | Narmada                 | Additional District Health Officer       |
| 22            | Navsari                 | Additional District Health Officer       |
| 23            | Panchmahal              | Additional District Health Officer       |
| 24            | Patan                   | Additional District Health Officer       |
| 25            | Porbandar               | Additional District Health Officer       |
| 26            | Rajkot                  | Additional District Health Officer       |
| 27            | Sabarkantha             | Additional District Health Officer       |
| 28            | Surat                   | Additional District Health Officer       |
| 29            | Surendranagar           | Additional District Health Officer       |
| 30            | Tapi                    | Additional District Health Officer       |
| 31            | Dang                    | District Health Officer                  |
| 32            | Vadodara                | Additional District Health Officer       |
| 33            | Valsad                  | Additional District Health Officer       |

By order and in the name of the Governor of Gujarat,

**A. J. BHADSHIA,**  
Under Secretary to Government.



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# The Gujarat Government Gazette

## EXTRAORDINARY

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#### PART IV-A

Rule and Orders (Other than those published in Parts I, I-A, and I-L) made  
by the Government of Gujarat under the Central Acts

#### FOREST AND ENVIRONMENT DEPARTMENT

#### Notification

Sachivalaya, Gandhinagar, 17<sup>th</sup> May, 2018

#### Indian Forest Act, 1927 (XVI OF 1927).

**GVN/2018-(03)/JJM/2017/GSF-01/F:-** In exercise of the power conferred Section-20 of the Indian Forest Act, 1927 (XVI of 1927) in its application to the State of Gujarat The Government of Gujarat with reference to the environment and forest department notification No :- GVN-2004/(24)/JJM-1004-611/K. Dated : 28/12/2004 published in Gujarat Government gazette part : 1 Dated:- 15/12/2004 on page no.142-1 to 142-3 is pleased to declare the land in MANDVI TALUKA of Kutch District specified in the Schedule here to appended to be “RESERVE FOREST” with effect from the date of issue of this notification on.

#### SCHEDULE

Taluka : Mandvi

District : Kutch

| Sr.<br>No | Name of<br>Village | Survey No                                    | AREA                    |                                | Boundaries   |
|-----------|--------------------|--|-------------------------|--------------------------------|--|
|           |                    |  | A.G                     | H.A.Sq.                        |  |
| 1         | 2                  | 3  | 4                       | 5                              | 6  |
| 1         | Changdai<br>Part-1 | 63,<br>72,<br>73<br>(old Sr.No<br>216 paiki) | 223.34<br>11.18<br>2.35 | 90.59.57<br>4.63.70<br>1.16.15 | North : Boundary of village<br>Kokaliya. S.No.65 and Boundry<br>of village Kokaliya.<br>East : Boundry of village Dedhiya.<br>South : S.No.66, Marag, S.No.67,71,74,<br>382,383,384,385, Marag,<br>S.No.391 (Gauchar),<br>S.No.3 (Changlasar Pond)<br>West : S.No. 64 (Gauchar). |

| Sr. No | Name of Village | Survey No                                      | AREA                    |                                 | Boundaries  |
|--------|-----------------|--|-------------------------|---------------------------------|---|
|        |                 |  | A.G                     | H.A.Sq.                         |   |
| 1      | 2               | 3  | 4                       | 5                               | 6   |
|        | Part-2          | 104<br>(old Sr.No. 216 paiki)                  | 163.15                  | 66.12.53                        | North : S.No.101,102,103, Boundry of village Dedhiya.<br>East : Boundry of village Bayath.<br>South : Boundry of village Mapar, S.No.105,106,107,108 (Dam)<br>West : S.No.252,253,280,279,Marag, 281,332,334,Marag,335,355,356, 100,96,95.                  |
|        | Part-3          | 5/2,<br>182,<br>185,<br>(old Sr.No. 216 paiki) | 29.10<br>116.02<br>6.25 | 11.84.48<br>46.96.27<br>2.67.83 | North : S.No.5/1 (Gauchar), S.No.171, 184,183 and 226.<br>East : S.No.232,235,230,229,228,227, 225,224 and 223.<br>South : S.No.222,190,191,189,Marag Boundry of village Bambhdai, S.No.170 and Boundry of village Bambhdai.<br>West : S.No. 5/1 (Gauchar). |
|        |                 | <b>Total :</b>                                 | <b>553.20</b>           | <b>224.00.53</b>                |   |

By order and in the name of the Governor of Gujarat,

**MANISH C. SHAH,**

Under Secretary to Government.

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વન અને પર્યાવરણ વિભાગ

જાહેરનામું

સચિવાલય, ગાંધીનગર, ૧૭મી મે, ૨૦૧૮.

સને : ૧૯૨૭ના ભારતના જંગલો બાબતના ૧૬માં અધિનિયમ અન્વયે.....

ક્રમાંક: ગવન/૨૦૧૮-(૦૩)/જજમ/૨૦૧૭/જીએસએફ-૧/એફ :- સને ૧૯૨૭ના ભારતના જંગલો બાબતનાં (સને ૧૯૨૭ના ૧૬માં) અધિનિયમની કલમ-૨૦ હેઠળ મળેલા અધિકારો અન્વયે ગુજરાત સરકાર, ગુજરાત રાજ્યપત્રના તા.૨૮/૧૨/૨૦૦૪ના પાના નં.૧૪૧-૧ થી ૧૪૧-૩ પર પ્રસિદ્ધ કરેલી તા.૧૫/૧૨/૨૦૦૪ના વન અને પર્યાવરણ વિભાગની અધિસૂચના ક્રમાંક : ગવન-૨૦૦૪/(૨૪)/જજમ/૧૦૦૪/૬૧૧-ક નાં અનુસંધાને આ સાથે જોડેલી અનુસૂચિમાં નિર્દિષ્ટ કરેલ કચ્છ જિલ્લાના માંડવી તાલુકાની જમીનને આ અધિસૂચના પ્રસિદ્ધ થયાની તારીખથી "અનામત જંગલ" તરીકે જાહેર કરે છે.

અનુસૂચિ

તાલુકો : માંડવી

જિલ્લો : કચ્છ

| અ.નં | ગામનું નામ       | સર્વે નંબર | વિસ્તાર         |                     | ચતુ:સીમા   |
|------|------------------|------------|-----------------|---------------------|--|
|      |                  |            | એકર-ગુંઠા       | હે.આર-ચો.મી         |  |
| ૧    | ૨                | ૩          | ૪               | ૫                   | ૬  |
| ૧    | ચાંગડાઈ<br>ભાગ-૧ | ૬૩,<br>૭૨, | ૨૨૩.૩૪<br>૧૧.૧૮ | ૮૦.૫૮.૫૭<br>૪.૬૩.૭૦ | ઉત્તર : મોજે કોકલીયાનો સીમાડો, સ.નં. ૬૫ તથા<br>મોજે કોકલીયાનો સીમાડો |

| અ.નં | ગામનું નામ | સર્વે નંબર                                      | વિસ્તાર                 |                                 | ચતુ:સીમા  |
|------|------------|---|-------------------------|---------------------------------|---|
|      |            |   | એકર-ગુંઠા               | હે.આર-ચો.મી                     |   |
| ૧    | ૨          | ૩   | ૪                       | ૫                               | ૬   |
|      |            | ૭૩<br>(જુના<br>સ.નં.૨૧૬ પૈકી)                   | ૨.૩૫                    | ૧.૧૬.૧૫                         | પૂર્વ : મોજે દેઢીયાનો સીમાડો<br>દક્ષિણ : સ.નં. ૬૬, મારગ, સ.નં. ૬૭, ૭૧, ૭૪,<br>૩૮૨, ૩૮૩, ૩૮૪, ૩૮૫, મારગ,<br>સ.નં. ૩૮૧ (ગૌચર),<br>સ.નં. ૩ (ચાંગળાસર તળાવ<br>પશ્ચિમ : સ.નં. ૬૪ (ગૌચર)  |
|      | ભાગ-૨      | ૧૦૪<br>(જુના<br>સ.નં.૨૧૬ પૈકી)                  | ૧૬૩.૧૫                  | ૬૬.૧૨.૫૩                        | ઉત્તર : સ.નં. ૧૦૧, ૧૦૨, ૧૦૩, મોજે દેઢીયાનો<br>સીમાડો<br>પૂર્વ : મોજે બાયઠનો સીમાડો<br>દક્ષિણ : મોજે માપરનો સીમાડો, સ.નં. ૧૦૫, ૧૦૬,<br>૧૦૭, ૧૦૮ (ડેમ).<br>પશ્ચિમ : સ.નં. ૨૫૨, ૨૫૩, ૨૮૦, ૨૭૯ મારગ,<br>૨૮૧, ૩૩૨, ૩૩૪ મારગ, ૩૩૫, ૩૫૫,<br>૩૫૬, ૧૦૦, ૯૬, ૯૫.                  |
|      | ભાગ-૩      | ૫/૨<br>૧૮૨,<br>૧૮૫,<br>(જુના સ.નં.<br>૨૧૬ પૈકી) | ૨૯.૧૦<br>૧૧૬.૦૨<br>૬.૨૫ | ૧૧.૮૪.૪૮<br>૪૬.૯૬.૨૭<br>૨.૬૭.૮૩ | ઉત્તર : સ.નં. ૫/૧ (ગૌચર), સ.નં. ૧૭૧, ૧૮૪,<br>૧૮૩ અને ૨૨૬.<br>પૂર્વ : સ.નં. ૨૩૨, ૨૩૫, ૨૩૦, ૨૨૯, ૨૨૮,<br>૨૨૭, ૨૨૫, ૨૨૪ અને ૨૨૩.<br>દક્ષિણ : સ.નં. ૨૨૨, ૧૯૦, ૧૯૧, ૧૮૯, મારગ,<br>મોજે બાંભડાઈનો સીમાડો,<br>સ.નં. ૧૭૦ અને મોજે બાંભડાઈનો સીમાડો<br>પશ્ચિમ : સ.નં. ૫/૧ (ગૌચર) |
|      |            | કુલ   | ૫૫૩.૨૦                  | ૨૨૪.૦૦.૫૩                       |   |

ગુજરાતના રાજ્યપાલશ્રીના હુકમથી અને તેમના નામે,

મનીષ સી. શાહ,  
સરકારના ઉપસચિવ.

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## PART IV-A

**Rules and Orders (Other than those published in Parts I, I-A, and I-L) made  
by the Government of Gujarat under the Central Acts**

### HOME DEPARTMENT

#### Notification

Sachivalaya, Gandhinagar, 17<sup>th</sup> May, 2018.

#### Code of Criminal Procedure, 1973.

**No.GG/36/2018/SB.2/COM/132011/GAD/165605(P.F.).--** In exercise of the powers conferred by section 357A of the Code of Criminal Procedure, 1973 (2 of 1974) in its application to the State of Gujarat, the Government of Gujarat hereby amends the Gujarat Victim Compensation Scheme, 2016, as follows, namely :-

1. This Scheme may be called the Gujarat Victim Compensation (Amendment) Scheme 2018.
2. In the Gujarat Victim Compensation Scheme, 2016, in clause 8, sub clause (1), the following words shall be added at the end, namely :-

“However, while instituting proceeding before the competent court, the court-fee shall not be required to be paid by the District Legal Service Authority or, as the case may be, the State Legal Service Authority.”

By order and in the name of the Governor of Gujarat,

**PANKAJ DAVE,**  
Under Secretary to Government.





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#### LEGAL DEPARTMENT

#### Notification

Sachivalaya, Gandhinagar, 20<sup>th</sup> April, 2018.

#### Code of Criminal Procedure, 1973.

**No.GK/09/2018/SPC/102016/2392/D :-** in exercise of the powers conferred by sub-section (1) of section 11 of the Code of Criminal Procedure, 1973 (2 of 1974), the Government of Gujarat, after consultation with the High Court of Gujarat, hereby designate the Court of Chief Judicial Magistrate, Gandhinagar for the areas of the Jurisdiction at Gandhinagar, Mahesana, Sabarkantha and Arvalli Districts, for the offences registered at C.I.D. Crime Gandhinagar Zone Police Station.

By order and in the name of the Governor of Gujarat,

**H.H. VARMA,**

Deputy Secretary to Government.

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# The Gujarat Government Gazette

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### PART IV-A

**Rules and Orders (Other than those published in Parts I, I-A, and I-L) made by the Government of Gujarat under the Central Acts**

#### HEALTH AND FAMILY WELFARE DEPARTMENT

#### Notification

Sachivalaya, Gandhinagar, 14<sup>th</sup> May, 2018.

#### DENTISTS ACT, 1948.

No. GP-11/DNT/1007/2020/J:- In exercise of the powers conferred by section 21 of the Dentists Act, 1948 (XVI of 1948), the Government of Gujarat hereby amends the Government Notification, Health and Family Welfare Department No.GP-53-DNT-1007-2020-J, dated the 25<sup>th</sup> October, 2017, as follows, namely:-

(1) In the said notification,-

(i) For the existing entries at serial number 5, 6 and 7, the following entries shall be substituted, namely:-

|   |  |   |
|---|--|---|
| 5 | <b>Dr. Viral Indravadan Patel,</b><br>101-Murtidham Dreams, B/h. Navrang School, D.K. Patel Hall Road,<br>Naranpura, Ahmedabad. - 380013                                   | Member elected under<br>clause (e) of Section 21    |
| 6 | <b>Dr. Kamalkumar Pravinbhai Bagda,</b><br>24-Devpriya Part-3, Opp: Hariomnagar Society, Motera, Ahmedabad. -<br>380005  | Member elected under<br>clause (e) of Section 21.   |
| 7 | <b>Dr. Bindan Bharatkumar Shah,</b><br>Gopi Dental Clinic and implant Centre, C-14, Ushakiran Apartment,<br>Sardarnagar Main Road, Rajkot Colour Lab, Yagnik Road, Rajkot. | Member elected under<br>clause (e) of Section 21.", |

(ii) after the existing entry at serial number 9, the following entry shall be inserted, namely :-

|    |   |   |
|----|---|---|
| 10 | <b>Dr. Anil J. Nayak,</b><br>9-Shyamvihar II Bunglows, Radhanpur Road, Highway, Mehsana. - 382002 | Member elected under<br>clause (d) of Section-21. |
|----|---|---|

By order and in the name of the Governor of Gujarat,

**V. G. VANZARA,**

Additional Secretary to Government.



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## PART IV-A

**Rule and Orders (Other than those published in Parts I, I-A, and I-L) made  
by the Government of Gujarat under the Central Acts**

### LEGAL DEPARTMENT

#### Notification

Sachivalaya, Gandhinagar, 21<sup>st</sup> April, 2018

**No.: GK/ 10 /2018/SUP/102015/74-D (PART-1): -**

**WHEREAS**, the Government of India, in pursuance of directions of Hon'ble Supreme Court, had appointed the Second National Judicial Pay Commission to examine and make suitable recommendations relating to the pay structure and emoluments of Judicial Officers in the States and Union Territories, including pension and other post-retirement benefits and also to examine the work methods and work environment with a view to promoting efficiency in judicial administration.;

**AND WHEREAS**, the said Judicial Pay Commission had submitted its interim report before the Hon'ble Supreme Court on 9th March, 2018 ;

**AND WHEREAS**, the Hon'ble Supreme Court of India in Writ Petition (Civil) No. 643 of 2015 vide its order dated 27th March 2018, has given directions to the State Government for the implementing the interim relief (Pay) for Subordinate Judicial Officers as recommended by the Second National Judicial Pay Commission;

**AND WHEREAS**, in compliance with the directions of the Hon'ble Supreme Court, the Government of Gujarat has decided to implement the following interim relief (Pay) for Subordinate Judicial Officers as recommended by the Second National Judicial Pay Commission;

1. Interim relief to the extent of 30% of increase in Basic Pay with accrued increments shall be paid to all categories/ ranks of judicial officers.
2. The said increased in pay shall be treated as a separate component and no D.A. is payable thereon.
3. Arrears shall be worked out with effect from 01.01.2016 on the above basis. The details of calculations are set out in **Annexure-I**.
4. On the same basis, the interim relief shall be provided to the pensioners and family pensioners with effect from 01.01.2016 and the arrears to be paid accordingly.

5. The interim relief regarding the pay of the Judicial Officers as recommended by the Commission be implemented w.e.f. 1<sup>st</sup> of May 2018 and the arrears payable pursuant to the above mentioned recommendations shall be paid on or before 30<sup>th</sup> June, 2018.
6. The amounts payable by way of interim relief now proposed are liable to the adjusted against the future determination pursuant to the final report submitted by the commission.

This issue with the concurrence of finance department vide its note dated 13/04/2018 on this department's file of even number.

By order and in the name of the Governor of Gujarat,

**H. H. VARMA,**  
Deputy Secretary to Government.

### ANNEXURE-1

#### SNJPC Judicial Pay Scales:: interim Relief

| Jr. Civil Judge (Entry Level)<br>Pay scale : 27700-44770 |        |             |            | Jr. Civil Judge (ACP-I)<br>Pay scale : 33090-45480 |             |            | Jr. Civil Judge (ACP-II)<br>Pay scale : 39530-54010 |             |            |
|--|--------|-------------|------------|--|-------------|------------|---|-------------|------------|
| Sr. No.  | Pay    | Pay+IR@ 30% | Difference | Pay  | Pay+IR@ 30% | Difference | Pay   | Pay+IR@ 30% | Difference |
| 1  | 27,700 | 36010       | 8310       | 33,090   | 43017       | 9,927      | 39,530  | 51,389      | 11,859     |
| 2  | 28,470 | 37011       | 8541       | 34,010   | 44213       | 10,203     | 40,450  | 52,585      | 12,135     |
| 3  | 29,240 | 38012       | 8772       | 34,930   | 45409       | 10,479     | 41,530  | 53,989      | 12,459     |
| 4  | 30,010 | 39013       | 9003       | 35,850   | 46605       | 10,755     | 42,610  | 55,393      | 12,783     |
| 5  | 30,780 | 40014       | 9234       | 36,770   | 47801       | 11,031     | 43,690  | 56,797      | 13,107     |
| 6  | 31,550 | 41015       | 9465       | 37,690   | 48997       | 11,307     | 44,770  | 58,201      | 13,431     |
| 7  | 32,320 | 42016       | 9696       | 38,610   | 50193       | 11,583     | 45,850  | 59,605      | 13,755     |
| 8  | 33,090 | 43017       | 9927       | 39,530   | 51389       | 11,859     | 46,930  | 61,009      | 14,079     |
| 9  | 34,010 | 44213       | 10203      | 40,450   | 52585       | 12,135     | 48,010  | 62,413      | 14,403     |
| 10   | 34,930 | 45409       | 10479      | 41,530   | 53989       | 12,459     | 49,090  | 63,817      | 14,727     |
|  | 35,850 | 46605       | 10755      | 42,610   | 55393       | 12,783     | 50,320  | 65,416      | 15,096     |
|  | 36,770 | 47801       | 11031      | 43,690   | 56797       | 13,107     | 51,550  | 67,015      | 15,465     |
|  | 37,690 | 48997       | 11307      | 44,770   | 58201       | 13,431     | 52,780  | 68,614      | 15,834     |
|  | 38,610 | 50193       | 11583      | 45,850   | 59605       | 13,755     | 54,010  | 70,213      | 16,203     |
|  | 39,530 | 51389       | 11859      |  |             |            |   |             |            |
|  | 40,450 | 52585       | 12135      |  |             |            |   |             |            |
|  | 41,530 | 53989       | 12459      |  |             |            |   |             |            |
|  | 42,610 | 55393       | 12783      |  |             |            |   |             |            |
|  | 43,690 | 56797       | 13107      |  |             |            |   |             |            |
|  | 44,770 | 58201       | 13431      |  |             |            |   |             |            |

#### Judicial Pay Scales : Interim Relief

| Sr. Civil Judge (Entry Level)<br>Pay scale : 39530-54010 |        |             |            | Sr. Civil Judge (ACP-I)<br>Pay scale : 43690-56470 |             |            | Sr. Civil Judge (ACP-II)<br>Pay scale : 51550-63070 |             |            |
|--|--------|-------------|------------|--|-------------|------------|---|-------------|------------|
|  | Pay    | Pay+IR@ 30% | Difference | Pay  | Pay+IR@ 30% | Difference | Pay   | Pay+IR@ 30% | Difference |
|  | 39,530 | 51,389      | 11,859     | 43,690   | 56797       | 13,107     | 51,550  | 67,015      | 15,465     |
|  | 40,450 | 52,585      | 12,135     | 44,770   | 58201       | 13,431     | 52,780  | 68,614      | 15,834     |
|  | 41,530 | 53,989      | 12,459     | 45,850   | 59605       | 13,755     | 54,010  | 70,213      | 16,203     |
|  | 42,610 | 55,393      | 12,783     | 46,930   | 61009       | 14,079     | 55,240  | 71,812      | 16,572     |
|  | 43,690 | 56,797      | 13,107     | 48,010   | 62413       | 14,403     | 56,470  | 73,411      | 16,941     |
|  | 44,770 | 58,201      | 13,431     | 49,090   | 63817       | 14,727     | 57,700  | 75,010      | 17,310     |
|  | 45,850 | 59,605      | 13,755     | 50,320   | 65416       | 15,096     | 58,930  | 76,609      | 17,679     |
|  | 46,930 | 61,009      | 14,079     | 51,550   | 67015       | 15,465     | 60,310  | 78,403      | 18,093     |
|  | 48,010 | 62,413      | 14,403     | 52,780   | 68614       | 15,834     | 61,690  | 80,197      | 18,507     |

| Sr. Civil Judge (Entry Level)<br>Pay scale : 39530-54010 |        |                |            | Sr. Civil Judge (ACP-I)<br>Pay scale : 43690-56470 |                |            | Sr. Civil Judge (ACP-II)<br>Pay scale : 51550-63070 |                |            |
|--|--------|----------------|------------|--|----------------|------------|---|----------------|------------|
|  | Pay    | Pay+IR@<br>30% | Difference | Pay  | Pay+IR@<br>30% | Difference | Pay   | Pay+IR@<br>30% | Difference |
|  | 49,090 | 63,817         | 14,727     | 54,010   | 70213          | 16,203     | 63,070  | 81,991         | 18,921     |
|  | 50,320 | 65,416         | 15,096     | 55,240   | 71812          | 16,572     |   |                |            |
|  | 51,550 | 67,015         | 15,465     | 56,470   | 73411          | 16,941     |   |                |            |
|  | 52,780 | 68,614         | 15,834     |  |                |            |   |                |            |
|  | 54,010 | 70,213         | 16,203     |  |                |            |   |                |            |

**JUDICIAL PAY SCALES : INTERIM RELIEF**

| District Judge (Entry Level)<br>Pay scale : 51550-63070 |        |                |            | District Judge (Selection Grade)<br>Pay scale : 57700-70290 |                |            | District Judge (Super Time Scale)<br>Pay scale : 70290-76450 |                |            |
|---|--------|----------------|------------|---|----------------|------------|--|----------------|------------|
| Sr. No.   | Pay    | Pay+IR@<br>30% | Difference | Pay   | Pay+IR@<br>30% | Difference | Pay  | Pay+IR@<br>30% | Difference |
| 1   | 51,550 | 67,015         | 15,465     | 57,700  | 75010          | 17,310     | 70,290   | 91,377         | 21,087     |
| 2   | 52,780 | 68,614         | 15,834     | 58,930  | 76609          | 17,679     | 71,830   | 93,379         | 21,549     |
| 3   | 54,010 | 70,213         | 16,203     | 60,310  | 78403          | 18,093     | 73,370   | 95,381         | 22,011     |
| 4   | 55,240 | 71,812         | 16,572     | 61,690  | 80197          | 18,507     | 74,910   | 97,383         | 22,473     |
| 5   | 56,470 | 73,411         | 16,941     | 63,070  | 81991          | 18,921     | 76,450   | 99,385         | 22,935     |
| 6   | 57,700 | 75,010         | 17,310     | 64,450  | 83785          | 19,335     |  |                |            |
| 7   | 58,930 | 76,609         | 17,679     | 65,830  | 85579          | 19,749     |  |                |            |
| 8   | 60,310 | 78,403         | 18,093     | 67,210  | 87373          | 20,163     |  |                |            |
| 9   | 61,690 | 80,197         | 18,507     | 68,750  | 89375          | 20,625     |  |                |            |
| 10  | 63,070 | 81,991         | 18,921     | 70,290  | 91377          | 21,087     |  |                |            |

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### PART IV-A

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#### LEGAL DEPARTMENT

#### Notification

Sachivalaya, Gandhinagar, 19<sup>th</sup> April, 2018

#### Constitution of India.

**No. GK/8/2018/ICE/102016/3444/D :-** In exercise of the powers conferred by the proviso to Article 309 of the Constitution of India-and in supersession of the existing Rules made in this behalf, the Governor of Gujarat hereby makes the following rules to provide for regulating the recruitment to the post of Class I, Class II, Class III and Class IV services on the establishment of the Industrial Courts and Labour Courts of the State, which are under the control of the High Court of Gujarat, namely:-

#### PART-I

#### SHORT TITLE, COMMENCEMENT AND APPLICATION:-

1. These Rules may be called The Industrial Courts and Labour Courts (Recruitment and Conditions of Service of Non-Judicial Officers and Staff) Rules, 2018
2. They shall come into force from the date of their publication in the *Official Gazette*.
3. They shall apply to all the Non-Judicial Officers and Members of the Staff belonging to Class I, Class II, Class III and Class IV services on the establishment of Industrial Courts and Labour Courts of the State of Gujarat.

#### PART-II

4. **DEFINITIONS** :- For the purpose of these Rules;

- (A) "**Advisory Committee**" means the Committee as may be constituted by the High Court of Gujarat.
- (B) "**Appointing Authority**" means the President, Industrial Court, Ahmedabad, for the posts of Gazetted Class I, Class II and Non-Gazetted Class III and Class IV Services of the Courts.
- (C) "**Cell**" means the Centralized Recruitment Cell established by the High Court for the

purpose of direct recruitment on various posts which shall be guided by the Advisory Committee.

- (D) **"Courts"** means Courts established under Labour Legislations.
- (E) **"Departmental Promotion Committee"** means the Promotion Committee comprising the President, Industrial Court and other two members that may be nominated by the President, Industrial Court from the members, Industrial Courts and/or Judges, Labour Courts (Senior Division), for considering the promotion of the officers and members of the Staff to the various posts.
- (F) **"Government"** means the Government of the State of Gujarat.
- (G) **"Governor"** means the Governor of the State of Gujarat.
- (H) **"Head of the Department."** means the President, Industrial Court, Ahmedabad for Industrial Courts and Labour Courts of the State.
- (I) **"High Court"** means the High Court of Gujarat.
- (J) **"Industrial Court"** means the Court established under Section-7(A) of The Industrial Disputes Act, 1947 and Section 10 of The Bombay Industrial Relation Act, 1946.
- (K) **"Labour Court"** means the Court established under Section 7 of The Industrial Disputes Act, 1947 and Section 9 of The Bombay Industrial Relation Act, 1946.
- (L) **"Members of Staff"** means and includes the Class III and Class IV employees working on the establishment of the Industrial Courts and Labour Courts of the State of Gujarat.
- (M) **"Non-Judicial Officers"** means Class I and Class II officers appointed either by direct recruitment and/or promoted from amongst the Members of the staff of the Courts.
- (N) **"President"** means the President, Industrial Court, Ahmedabad.
- (O) **"Recruiting Authority"** means-
  - (i) The President, Industrial Court, for the posts of Class I to Class IV services, to be filled up by way of promotion and;
  - (ii) The Cell established by the High Court for recruitment to the posts to be filled up by direct recruitment.
- (P) **"Scheduled Castes"** means such castes, races or tribes or parts of groups within such castes, races or tribes as are deemed to be Scheduled Castes in relation to the State of Gujarat under Article 341 of the Constitution of India.
- (Q) **"Scheduled Tribes"** means such tribes or tribal communities or part of groups within such tribes or tribal communities as are deemed to be Scheduled Tribes in relation to the State of Gujarat under Article 342 of the Constitution of India.
- (R) **"Select List"** means a list showing the names of the successful candidates for being recruited to the various posts in any class or category.
- (S) **"Socially and Educationally Backward Classes"** means such castes, classes and groups as may be determined by the State Government as Socially and Educationally Backward Classes from time to time.

### Part-III

5. **CLASSIFICATION OF SERVICES OF POST:-** The services and posts on the establishment of the Courts of the State shall be classified as follow;

- (i) Class-I Gazetted
- (ii) Class-II Gazetted
- (ii) Class-III Non-Gazetted
- (iv) Class-IV Non-Gazetted.

6. **MODE OF APPOINTMENT:-** Appointment of the non-Judicial officers and members of the staff of the courts shall be made in the manner as indicated in these Rules, either by -

- (i) Direct Recruitment or
- (ii) Promotion or
- (iii) Deputation

7. **COMPOSITION OF POSTS:-**

**INDUSTRIAL COURTS AND LABOUR COURTS**  
**GAZETTED OFFICERS, CLASS I**

- 1. Registrar, Industrial Court, Ahmedabad.
- 2. Executive Assistant to the President, Industrial Court, Ahmedabad.
- 3. English/Gujarati Stenographer Grade-I.
- 4. Registrar, Labour Court, Ahmedabad.

**GAZETTED OFFICERS, CLASS II**

- 5. English Stenographer, Grade-II.
- 6. Gujarati Stenographer ,Grade-II.
- 7. Bench Clerk, Grade-I.

**NON-GAZETTED, CLASS III**

- 8. English Stenographer, Grade-III
- 9. Gujarati Stenographer, Grade-III
- 10. Superintendent, Industrial Court.
- 11. Superintendent, Labour Court/Bench Clerk, Grade-II.
- 12. Senior Clerk / Sub Accountant/Bench Clerk, Grade-III.
- 13. Librarian cum Research Assistant.
- 14. Assistant / Cashier
- 15. Driver.
- 16. Bailiff/Process server.

**NON-GAZETTED, CLASS IV**

- 17. Naik.
- 18. Peon / Watchman / Home attendant-Domestic attendant.

**General Conditions PART- IV**

8. **CALCULATION AND REQUISITION OF VACANCIES:**

Each year, the President shall send, to the Registrar of the Cell, by 1<sup>st</sup> June of the year, requisition of the requirement of the posts to be filled up by direct recruitment, indicating clear vacancies category-wise as on 1st May of the year, as well as future vacancies likely to occur by the next year between the month of June and May, due to the retirement, promotion,



creation of new posts owing to anticipated development or otherwise, in the prescribed proforma. Such calculation shall also include vacancy of reserved posts.

On receipt of such requisition of posts, the Cell shall take necessary steps to notify the total vacancies. Entire process of recruitment shall be governed by these Rules as well as the guidelines and the instructions issued by the High Court / Advisory Committee from time to time in that behalf, for making recruitment to the post in question. Any procedural steps not forming part of these Rules, shall be decided by the High Court/Advisory Committee.

**9. FUNCTION OF THE ADVISORY COMMITTEE :**

The Advisory Committee constituted by the High Court may instruct in general or in particular, for the recruitment process to be undertaken by the Cell.

**10. PREPARATION OF SELECT LIST AND WAIT LIST:**

The Select List and Wait List shall be prepared by the Cell of the High Court on the basis of the merits of the candidates which shall contain names of successful candidate/s to the extent notified in the advertisement.

The Cell shall thereafter allot the successful candidates on the basis of the vacancies notified in the Industrial Courts and Labour Courts, bearing in mind the preferences given by the selected candidates. The preference, however, would not give vested right to a candidate to insist for being posted in a particular district. The Cell shall also compute total vacancies for wait listed candidates which shall be 10% of total vacancy. The Wait List shall be maintained for both the Industrial Courts and Labour Courts and allotment of candidates from the Wait List shall be made accordingly to the requirement.

**11. EXPIRY OF THE SELECT LIST AND WAIT LIST :**

Any Select List and Wait List prepared by the Cell, shall be final and continue to remain in force until the posts advertised are filled-up or for the period of one year from the date of its publication on the High Court website, whichever is earlier.

**12. RESERVATION:**

Reservation in direct recruitment / promotion in various categories and classes of posts on the establishment of the Courts with regard to the Scheduled Castes, the Scheduled Tribes, the Socially and Educationally Backward Classes, Differently Abled Persons, Women and Ex-Service Men shall be in accordance with the prevailing Rules/Orders of the Government.

**13. APPOINTING AUTHORITY:**

The appointments to any posts in Gazetted Class I and Class II as well as Non Gazetted Class III and Class IV services, either by promotion or by direct recruitment, shall be made by the President, in view of the provisions of these Rules or from the lists prepared and forwarded to him by the High Court.

**14. PAY AND ALLOWANCES:-**

The persons born on the establishment of the Courts of the State shall draw such pay-scale as are indicated in **Schedule-A** to these Rules or as may be fixed or prescribed from time to time by the Government.

**15. ELIGIBILITY:**

A person shall not be eligible for appointment on the establishment of the Courts on any posts unless he or she possesses the qualifications and fulfill the requirements of such posts as are indicated in **Scheduled-B** to these Rules.

**16. AGE LIMIT:**

The lower and upper age limit of the candidates for appointment by direct recruitment on the establishment of the Courts shall be as prescribed in **Schedule-B** to these Rules.

The upper age limit may be relaxed in case of candidates belonging to Scheduled Castes, Scheduled Tribes, Socially and Educationally Backward Classes, Differently Abled Persons, Women and Ex-Service Men, as per the prevailing Government Rules / Orders.

The upper age limit may also be relaxed in favour of the employees of the State and on uniform basis, as provided in The Gujarat Civil Services Classification and Recruitment (General) Rules, 1967.

**17. AGE OF RETIREMENT:**

The age of retirement of the Non-Judicial Officers and Staff Members of the Courts, shall be as per the provisions contained in Chapter-III of The Gujarat Civil Services (Pension) Rules, 2002.

**18. CONFIRMATION:**

1. Every Assistant/Cashier who passes the Lower Standard Departmental Examination shall be confirmed in the existing vacancies. Even if, such employee who is junior in service has passed the Lower Standard Departmental Examination before an Assistant/Cashier who is senior in service, the Assistant/Cashier junior in service should be confirmed, if there is a permanent vacancy in preference to an Assistant/Cashier senior in service who has not passed the said examination.

2. Seniority in the Cadre of Assistant/Cashier shall be determined from the date of confirmation:

Provided that a Assistant/Cashier who passed the Lower Standard Departmental Examination within first three chances and within three years from the date of regular appointment and in case of Assistant/Cashier belonging to Schedule Castes or Schedule Tribes, within first four chances and within a period of four years, shall be assigned seniority over a person, if any who although being junior to him in the cadre, may have been given seniority by reason of his having been confirmed on his passing Lower Standard Departmental Examination earlier than him :

Provided further that, cases of Assistants/Cashiers whose confirmation and seniority are already fixed prior to the date of coming into the effect of these rules shall not be reopened.

3. An Assistant/Cashier senior in service in the lower grade has qualified himself for promotion by passing the Higher Standard Department Examination should not be promoted to a post in higher grade by reverting an Assistant/Cashier in the lower grade who is already officiating in the higher grade by reason of the fact that he had qualified himself earlier.

4. The same principal applies in the case of Assistant/Cashier, officiating in the temporary vacancies in the higher grade.

5. The seniority of the Assistant/Cashier in the higher grade should be determined from the date of their appointment to the higher grade and not by reference to seniority in the lower grade.

6. The President Industrial Court should circulate to all the Industrial and Labour Courts copies of the gradation list of the Assistant/Cashier and other members of the staff at least once a year.

**19. SENIORITY:**

Inter se seniority of two or more persons appointed on the same post in a class or category on the establishment of the Courts simultaneously will, notwithstanding the fact that they may join or assume duty of their appointment on different dates, shall be determined :-

- i) In the case of those promoted, by their relative seniority in the lower service, class, category or grade;
- ii) In the case of those recruited directly, as per the list prepared by the Cell, subject to fulfillment of the condition that the candidate joins his duty within the prescribed time as per the appointment order and also satisfy the other norms for confirmation as provided under the relevant Rules of the Government. ;
- iii) In any class or category of posts which provides for appointment both by promotion as well as by direct recruitment, the direct recruits shall rank senior to promotees.

**20. PROBATION:**

- i) Notwithstanding anything contained in these Rules, an Employee appointed to any post in Class I, Class II, Class III and Class IV services by direct recruitment, shall be on probation for the period as provided in The Gujarat Civil Services Classification and Recruitment (General) Rules, 1967.
- ii) In case of promotion to any post in Class I and Class II services, he shall be on probation for a period of one year from the date of such promotion.
- iii) If it appears at any time during or at the end of the probation that the services of the concerned employee are not found satisfactory, his services may be dispensed with, in case of a direct recruit or be reverted to the substantive post in case of a promotee, without any prior notice.
- iv) The period of probation provided in this rule may, in case of any particular person, be extended by the Appointing Authority.

**21. MEDICAL EXAMINATION (PHYSICAL FITNESS):**

Each person appointed by direct recruitment on the establishment of the Courts shall be required to produce a medical certificate of fitness in accordance with the provisions contained in The Gujarat Civil Services (General Conditions of Services) Rules, 2002.

**22. COMPUTER EXAMINATION:**

To be eligible for appointment to any post in Gazetted Class I and Class II as well as Non-Gazetted Class III services, either by direct recruitment or by promotion on the establishment of the Courts, a candidate must possess a certificate regarding basic knowledge of computer in accordance with the provisions of The Gujarat Civil Services Classification and Recruitment (General) Rules, 1967 and/or The Gujarat Civil Services Computer Competency Training and Examination Rules, 2006 as the case may be or as applicable.

**23. DEPARTMENTAL EXAMINATION:**

After appointment, on the establishment of the Courts the Members of the Staff concerned shall require to pass within the prescribed time limit the departmental examinations, as provided in **Schedule-C**, for being considered for promotion to the next higher post/grade.

**24. HINDI / GUJARATI EXAMINATION:**

A member of the staff shall be required to pass an examination in Hindi or Gujarati or both in accordance with the rules prescribed by the Government from time to time in this behalf.

**25. TRAINING :**

A member of the staff shall have to undergo such training as may be prescribed by the High Court and instructions issued thereof from time to time.

**26. APPOINTMENT ON COMPASSIONATE GROUND:**

In case of death of an employee belonging to Class III or class IV services, his dependants shall be given benefits in accordance with the prevailing Rules/Policy of the Government.

**27. DEPUTATION:**

The High Court at its discretion may appoint any person on the establishment of the Courts, on deputation from any source. The High Court may, in appropriate case, permit an Officer or Member of the Staff to go on deputation, out side the Courts, for such period as it may consider appropriate.

**28. PROMOTION:**

1. Where an appointment to any post is to be made by the promotion, no employee shall be entitled to such promotion on the ground of seniority alone. No such appointment shall be made unless in addition to seniority, the employee to be appointed is found to be fit for such promotion.
2. No one shall be promoted to higher post unless he passes the requisite departmental examination as well as qualifying examination for Computer knowledge.
3. Promotion to any post in any class or category on the establishment of the Courts, shall be made by the President, as per the provision made in **Scheduled-B** to these Rules. However, prior approval of the High Court shall be required to be obtained for Class I posts.

However, where the President is satisfied that a person having the experience specified, is not available for promotion and that it is necessary in the public interest to fill up the post by promotion even of a person having experience of a lesser period; it may, for reasons to be recorded in writing, promote such person who possesses experience of a period of not less than two-thirds of the period specified.

**29. POSTING AND TRANSFER:**

All the Non-Judicial Officers and Members of Staff in Class I to Class IV services may be transferred to any Industrial Court / Labour Court in the State, by the President on completion of three years at one station / place. An employee may be retained for a longer period than prescribed, for the administrative exigency and in the public interest.

However, High Court may transfer any employee to an equivalent post in respective class or category, to any District Court / Family Court / City Civil Courts, Small Causes Courts and Metropolitan Magistrates' Courts, Ahmedabad, on administrative ground or otherwise.

**30. CONDITIONS OF SERVICES :**

The conditions of service of Non-Judicial Officers and Members of Staff for which no provision or insufficient provision has been made in these rules, the Rules and Orders for the time being in force and applicable to employees holding corresponding posts in the Government, which are not inconsistent with these Rules, shall regulate the conditions of service of such employees, subject to such modifications, variations, and exceptions, if any, in the said Rules and Orders, as the High Court may from time to time specify.

If any question arises as to which Rules or Orders are applicable to the case of any particular person serving on the establishment of the Courts of the State and as to interpretation thereof, it shall be decided by the High Court and its decisions shall be final.

**31. RESIDUARY MATTERS :**

The matters of conduct of the Non-Judicial Officers and Members of the Staff of the Courts shall be governed by The Gujarat Civil Services (Conduct), Rules, 1971 and The Gujarat Civil Services (Discipline & Appeal), Rules, 1971 as well as the amendments/modifications thereto, that may be made by the Government from time to time.

**32. CONTROL:**

All the Non-Judicial Officers and Members of the Staff working on the establishment of the Courts shall be under the direct control and superintendence of the High Court.

**33. APPOINTMENT BY RELAXATION OF RULES :**

Notwithstanding anything contained in these rules, the High Court may, in the interest of administration of justice:-

- (i) permit the appointing authority to appoint a person to any services or post by method other than that prescribed under these rules, or
- (ii) relax any of the provisions of these rules.

**34. REPEAL AND SAVING:**

The Notifications in respect of rules of recruitment of candidates to Class-I to Class-IV services in the Industrial Courts and Labour Courts of the State as well as the instructions issued by the Government from time to time with regard to recruitment to any post in any Class or category and Notification in respect of the Departmental Examination, shall hereby stands repealed.

Provided that such repeal shall not affect the previous operation of the rules/instructions so repealed or anything done or any action taken thereunder.

**SCHEDULED- A (Rule-14)**

| Sr.<br>No.                                | Name of the Post  | Existing Pay<br>Scale | Revised Pay<br>Scale as per<br>the<br>Shetty Pay<br>Commission |
|---|---|-----------------------|--|
|   |   | Grade Pay             | Grade Pay  |
|   |   | Pay Band              | Pay Band   |
| <b><u>GAZETTED OFFICERS, CLASS I</u></b>  |   |                       |  |
| 1   | Registrar, Industrial Courts                                    | 9300-34800            | 15600-39100  |
|   |   | 4600                  | 7600   |
|   |   | PB-2                  | PB-3   |
| 2   | Executive Assistant to President, Industrial Courts, Ahmedabad. | 15600-39100           | ---  |
|   |   | 6600                  | ---  |
|   |   | PB-3                  | ---  |
| 3   | English/Gujarati Stenographer, Grade-I                          | 15600-39100           | ---  |
|   |   | 6600                  | ---  |
|   |   | PB-3                  | ---  |
| 4   | Registrar, Labour Courts  | 9300-34800            | 15600-39100  |
|   |   | 4600                  | 5400   |
|   |   | PB-2                  | PB-3   |
| <b><u>GAZETTED OFFICERS, CLASS II</u></b> |   |                       |  |
| 5   | English Stenographer, Grade-II                                  | 9300-34800            | ---  |
|   |   | 4600                  | ---  |
|   |   | PB-2                  | ---  |
| 6   | Gujavati Stenographer, Grade-II                                 | 9300-34800            | ---  |
|   |   | 4600                  | ---  |
|   |   | PB-2                  | ---  |
| 7   | Bench Clerk Grade-I   | 5200-20200            | 9300-34800   |
|   |   | 2800                  | 4600   |
|   |   | PB-1                  | PB-2   |
| <b><u>NON-GAZETTED, CLASS III</u></b>     |   |                       |  |
| 8   | English Stenographer, Grade-III                                 | 9300-34800            | ---  |
|   |   | 4400                  | ---  |
|   |   | PB-2                  | ---  |
| 9   | Gujarati Stenographer, Grade-III                                | 9300-34800            | ---  |
|   |   | 4400                  | ---  |
|   |   | PB-2                  | ---  |
| 10  | Superintendent, Industrial Courts                               | 9300-34800            | ---  |
|   |   | 4400                  | ---  |
|   |   | PB-2                  | ---  |
| 11  | Superintendent, Labour Court/Bench Clerk, Grade-II              | 9300-34800            | ---  |
|   |   | 4200                  | ---  |
|   |   | PB-2                  | ---  |
| 12  | Senior Clerk / Sub Accountant/ Bench Clerk, Grade-III           | 5200-20200            | ---  |
|   |   | 2400                  | ---  |
|   |   | PB-1                  | ---  |

| Sr.<br>No.                           | Name of the Post                                | Existing Pay<br>Scale | Revised Pay<br>Scale as per<br>the<br>Shetty Pay<br>Commission |
|--------------------------------------|---|-----------------------|--|
|                                      |   | Grade Pay             | Grade Pay  |
|                                      |   | Pay Band              | Pay Band   |
| 13                                   | Librarian cum Research Assistant                | 5200-20200            | ---  |
|                                      |   | 2400                  | ---  |
|                                      |   | PB-1                  | ---  |
| 14                                   | Assistant/Cashier                               | 5200-20200            | ---  |
|                                      |   | 1900                  | ---  |
|                                      |   | PB-1                  | ---  |
| 15                                   | Driver  | 5200-20200            | ---  |
|                                      |   | 1900                  | ---  |
|                                      |   | PB-1                  | ---  |
| 16                                   | Bailiff/Process server                          | 5200-20200            | ---  |
|                                      |   | 1900                  | ---  |
|                                      |   | PB-1                  | ---  |
| <b><u>NON-GAZETTED, CLASS IV</u></b> |   |                       |  |
| 17                                   | Naik  | 4440-7440             | ---  |
|                                      |   | 1400                  | ---  |
|                                      |   | -IS                   | ---  |
| 18                                   | Peon/Watchman/Home attendant-Domestic attendant | 4440-7440             | ---  |
|                                      |   | 1300                  | ---  |
|                                      |   | -IS                   | ---  |

**SCHEDULED- B****(Rule-15)**

| Sr. No                                    | Original Designation         | Present Designation  | Mode of Recruitment  | Name of Feeder Cadre   | Minimum Qualification  | Experience if required  |
|---|------------------------------|--|--|--|--|---|
| <b><u>GAZETTED OFFICERS. CLASS I</u></b>  |                              |  |  |  |  |   |
| 1   | Registrar, Industrial Courts | Registrar, Industrial Courts (15600-39100 + Rs.7600) (Class I)                           | By Promotion, of a person, on the basis of proved merits, efficiency and past performance. Merits shall be evaluated by Oral/Personal Interview. | i) Registrar Labour Court (15600-39100 + Rs.5400) (Class I)  | Preferably Law Graduate  | Shall have 05 years experience in the cadre of Registrar, Labour Court or<br><br>Shall , have combined 08 years experience as Registrar, Labour Court and Bench Clerk, Grade-1. |
| 2   | ---                          | Executive Assistant to the President, Industrial Court (15600-39100 + Rs.6600) (Class I) | By posting of suitable person  | English/ Gujarati Stenographer Grade-1 (15600-39100 + Rs.6600) (Class I)                                 | ---  | ---   |
| 3   | Principal Private Secretary  | English/ - Gujarati Stenographer Grade-I (15600-39100 + Rs.6600) (Class I)               | By Promotion of a person, on the basis of efficiency and past performance.   | Up-gradation of 50% Posts from English/ Gujarati Stenographer Grade II (Class II) (9300-34800 + Rs.4600) | ---  | Not less than 08 years as English/ Gujarati Stenographer Grade-II   |
| 4   | Registrar, Labour Courts     | Registrar, Labour Courts (15600-39100 + Rs.5400) (Class I)                               | By Promotion, of a person, on the basis of proved merits, efficiency and past performance. Merits shall be evaluated by Oral/Personal Interview. | Bench Clerk Grade-I. (9300-34800 + Rs.4600) (Class II)   | Preferably Law Graduate  | Not less than 08 years in feeder cadre.   |
| <b><u>GAZETTED OFFICERS, CLASS II</u></b> |                              |  |  |  |  |   |
| 5   | English Stenographer Grade-I | English Stenographer Grade-II (9300-34800 + Rs. 4600) (Class II)                         | (i) 50% of Posts By promotion of a suitable person on the basis of efficiency and past performance.  | English Stenographer Grade-III (9300-34800+ Rs.4400) (Class III)   | i) For direct recruitment, a candidate shall have attained the age of 21 years and must not have attained the age of 40 years on | Not less than 07 years in feeder cadre.   |



| Sr. No | Original Designation | Present Designation | Mode of Recruitment  | Name of Feeder Cadre | Minimum Qualification   | Experience if required |
|--------|----------------------|---------------------|--|----------------------|---|------------------------|
|        |                      |                     | (ii) 50% of Posts by Direct Recruitment on the basis of the competitive Examination. |                      | <p>the date specified in the advertisement.</p> <p>ii) Bachelor's Degree obtained from any of the Universities or Institutions established or incorporated by or under the Central or State Act in India; or any other educational Institution recognized as such or declared as deemed University under Section 3 of the University Grants Commission Act, 1956 or possess an equivalent qualification recognized by the Government.</p> <p>iii) possess Speed of 120 W.P.M. in English Short Hand for dictation of two paragraphs each of 04 minutes and Transcription thereof in Typing in 50 minutes.</p> <p>iv) sufficient knowledge of English, Gujarati and Hindi Language.</p> <p>v) Basic knowledge of computer as prescribed by the Government.</p> |                        |

| Sr. No | Original Designation          | Present Designation  | Mode of Recruitment   | Name of Feeder Cadre   | Minimum Qualification  | Experience if required                  |
|--------|-------------------------------|--|---|--|--|---|
| 6      | Gujarati Stenographer Grade-I | Gujarati Stenographer Grade-II (9600-34800 + Rs.4600) (Class II) | <p>(i) 50% of Posts By promotion of a suitable person on the basis of efficiency and past performance.</p> <p>(ii) 50% of Posts by Direct Recruitment on the basis of the competitive Examination</p> | <p>For promotion :- Gujarati Stenographer Grade-III</p> <p>(9300-34800+ Rs.4400) (Class III)</p> | <p>For Promotion and Direct Recruitment:</p> <p>i) For direct recruitment, a candidate shall have attained the age of 21 years and must not have attained the age of 40 years on the date specified in the advertisement</p> <p>ii) Bachelor's Degree obtained from any of the Universities or Institutions established or incorporated by or under the Central or State Act in India; or any other educational Institution recognized as such or declared as deemed University under Section 3 of the University Grants Commission Act, 1956 or possess an equivalent qualification recognized by the Government.</p> <p>iii) possess Speed of 90 W.P.M. in Gujarati Short Hand for dictation of two paragraphs each of 04 minutes and Transcription thereof in Typing in 75 minutes.</p> <p>iv) knowledge of English, Gujarati</p> | Not less than 07 years in feeder cadre. |

| Sr. No                                | Original Designation                  | Present Designation  | Mode of Recruitment   | Name of Feeder Cadre  | Minimum Qualification  | Experience if required   |
|---------------------------------------|---------------------------------------|--|---|---|--|--|
|                                       |                                       |  |   |   | and Hindi Language.<br>v) Basic knowledge of Computer as prescribed by the Government.   |  |
| 7                                     | Clerk of the Court, Industrial Courts | Bench Clerk Grade-I (9300-34800 + Rs. 4600) (Class II)             | By Promotion on the basis of past performance and efficiency.   | Superintendent, Industrial Court (9300-34800 +Rs.4400) classs III |  | Shall have 07 years experience in the cadre of Superintendent, Industrial Court, or Shall have combined 08 years experience as Superintendent, Industrial Court and Superintendent, Labour Court |
| <b><u>NON-GAZETTED, CLASS III</u></b> |                                       |  |   |   |  |  |
| 8                                     | English Stenographer Grade-II         | English Stenographer Grade-III (9300-34800 + Rs. 4400) (Class III) | By Direct Recruitment, on the basis of Competitive Examination. |   | i) A candidate shall have attained the age of 21 years and must not have attained the age of 35 years on the date specified in the advertisement.<br><br>ii) Bachelor's Degree obtained from any of the Universities or Institutions established or incorporated by or under the Central or State Act in India; or any other educational Institution recognized as such or declared as deemed University under Section 3 of the University |  |

| Sr. No | Original Designation           | Present Designation   | Mode of Recruitment  | Name of Feeder Cadre | Minimum Qualification  | Experience if required |
|--------|--------------------------------|---|--|----------------------|--|------------------------|
|        |                                |   |  |                      | <p>Grants Commission Act, 1956 or possess an equivalent qualification recognized by the Government.</p> <p>iii) possess Speed of 100 W.R.M. in English Short Hand for dictation of two paragraphs each of 04 minutes and Transcription thereof in Typing in 50 minutes.</p> <p>iv) sufficient knowledge of English, Gujarati and Hindi Language.</p> <p>v) Basic knowledge of computer as prescribed by the Government</p> |                        |
| 9      | Gujarati Stenographer Grade-II | Gujarati Stenographer Grade-III (9300-34800 + Rs. 4400) (Class III) | By Direct Recruitment, on the basis of Competitive Examination |                      | <p>i) A candidate shall have attained the age of 21 years and must not have attained the age of 35 years on the date specified in the advertisement.</p> <p>ii) Bachelor's Degree obtained from any of the Universities or Institutions established or incorporated by or under the Central or State Act in India; or any other educational</p>  |                        |

| Sr. No | Original Designation   | Present Designation   | Mode of Recruitment   | Name of Feeder Cadre   | Minimum Qualification  | Experience if required   |
|--------|--|---|---|--|--|--|
|        |  |   |   |  | <p>Institution recognized as such or declared as deemed University under Section 3 of the University Grants Commission Act, 1956 or possess an equivalent qualification recognized by the Government.</p> <p>iii) possess Speed of 75 W.P.M. in Gujarati Short Hand for dictation of two paragraphs each of 04 minutes and Transcription thereof in Typing in 60 minutes.</p> <p>iv) sufficient knowledge of English, Gujarati and Hindi Language.</p> <p>v) Basic knowledge of computer as prescribed by the Government</p> |  |
| 10     | Superintendent , Industrial Court                              | Superintendent, Industrial Court (9300-34800 + Rs.4400) (Class III)                   | By Promotion On the basis of past performance and efficiency. | Superintendent, Labour Courts/ Bench Clerk Grade-II (9300-34800 + Rs.4200) Class III | —  | Shall have 05 years experience in the feeder cadre               |
| 11     | Superintendent , Labour Court/Clerk of the Court, Labour Court | Superintendent, Labour Court/ Bench Clerk Grade-II (9300-34800 + Rs.4200) (Class III) | By Promotion on the basis of past performance and efficiency. | Senior Clerk/Sub Accountant/ Bench Clerk Grade-III (5200-20200 + Rs.2400) Class III  | —  | Not less than 05 years jointly or separately in the feeder cadre |
| 12     | Senior Clerk/ Sub Accountant/                                  | Senior Clerk/ Sub Accountant/   | By Promotion on the basis of past                             | Assistant / Cashier (5200-20200 +  | —  | Not less than 05 years jointly or separately in                  |

| Sr. No | Original Designation                              | Present Designation                                    | Mode of Recruitment   | Name of Feeder Cadre  | Minimum Qualification   | Experience if required  |
|--------|---|--|---|---|---|---|
|        | Clerk of the Court, Labour Court                  | Bench Clerk Grade-III (5200-20200 + Rs.2400) Class III | performance and efficiency.   | Rs.1900) Class III  |   | feeder cadre.   |
| 13     | Librarian cum Research Assistant                  | Librarian cum Research Assistant                       | <p>i) By Promotion on the basis of past performance, proved merits and efficiency.</p> <p>OR</p> <p>ii) By Direct Recruitment on the basis of Competitive Examination.</p>  | Assistant/ Cashier (5200-20200 + Rs.1900) (Class III)   | <p>For Promotion and Direct Recruitment:</p> <p>i) For direct recruitment, a candidate shall have attained the age of 21 years and must not have attained the age of 37 years on the date specified in the advertisement</p> <p>ii) Bachelor of Library and Information Science or its equivalent Degree from a University recognized by the Government</p> <p>iii) Preferably Degree in Law</p> <p>iv) Possess Basic Knowledge of Computer as prescribed by the Government.</p> <p>v) sufficient knowledge of English, Gujarati and Hindi.</p> | For promotion not less than 05 years in the feeder cadre. For direct recruitment-02 years experience of working in any well organized Library after obtaining degree. |
| 14     | Assistant / Junior Clerk/ Clerk-cum-Typist/Typist | Assistant/ Cashier (5200-20200 + Rs.1900) (Class III)  | <p>i) 15% of Posts By Promotion, on the basis of past performance, proved merits and efficiency.</p> <p>ii) 10% of posts shall be filled by transfer</p> <p>iii) 75% of</p> | <p>I) by promotion of person working in Class IV services (4440-7440+ Rs.1400) (4440-7440+ Rs.1300)</p> <p>ii) by transfer of person working as</p> | <p>For Promotion and Direct Recruitment:</p> <p>i) For direct recruitment, a candidate shall have attained the age of 21 years and must not have attained the age of 35 years on the date</p>   | For Promotion; Not less than 05 years in feeder cadre, and must possess the qualifications - (ii) to (v) prescribed for direct recruitment                            |

| Sr. No | Original Designation | Present Designation                       | Mode of Recruitment  | Name of Feeder Cadre  | Minimum Qualification   | Experience if required   |
|--------|----------------------|---|--|---|---|--|
|        |                      |   | Posts by Direct Recruitment on the basis of Competitive Examination.   | Process Server/ Bailiff, (Class III) (5200-20200 + Rs.1900) (Class III)               | specified in the advertisement<br>ii) Bachelor's Degree obtained from any of the Universities or Institutions established or incorporated by or under the Central or State Act in India; or any other educational Institution recognized as such or declared as deemed University under Section 3 of the University Grants Commission Act, 1956 or possess an equivalent qualification recognized by the Government<br>iii) 5000 key depression on computer in English and/or Gujarati<br>iv) Possess Basic Knowledge of Computer as prescribed by the Government.<br>v) sufficient knowledge of English, Gujarati and Hindi. |  |
| 15     | Driver               | Driver (5200-20200 + Rs.1900) (Class III) | i) By Promotion, on the basis of proved merits and efficiency and test in driving. OR<br>ii) By Direct Recruitment on the basis of | For Promotion: Class IV Services (Class IV) (4440-7440+ Rs.1400) (4440-7440+ Rs.1300) | i) For direct recruitment, a candidate shall have attained the age of 23 years and must not have attained the age 33 years on the date specified  | For Promotion:<br>i) Not less than 05 years in the feeder cadre and must possess the qualifications - (ii) to (viii) prescribed for direct |

| Sr. No | Original Designation | Present Designation | Mode of Recruitment      | Name of Feeder Cadre | Minimum Qualification   | Experience if required   |
|--------|----------------------|---------------------|--------------------------|----------------------|---|--|
|        |                      |                     | Competitive Examination. |                      | <p>in the advertisement.</p> <p>ii) Must pass Higher Secondary Certificate Examination from the Board recognized by the Government or an equivalent Examination recognized as such by the Government.</p> <p>iii) Must possess a valid Light and/ or Heavy Motor Driving License of about 03 years standing.</p> <p>iv) Must possess adequate knowledge of Motor Vehicle maintenance, and Traffic Signs. However preference shall be given to the candidates who possess the knowledge of mechanism and repairing of Motor Vehicle.</p> <p>v) Have good physique with;</p> <p><b>In case of Male candidate</b></p> <p>1) Height not less than 162 Cms.</p> <p>(158 Cms. For the candidates of Scheduled Tribes of the State of Gujarat) 2) Chest Measurement of not less than 84 Cms. when full</p> | <p>recruitment.</p> <p>For Direct Recruitment: About 05 years experience of Driving in a Government/ private sector or with an individual.</p> |



| Sr. No | Original Designation | Present Designation  | Mode of Recruitment   | Name of Feeder Cadre  | Minimum Qualification  | Experience if required  |
|--------|----------------------|--|---|---|--|---|
|        |                      |  |   |   | <p>inflated with minimum expansion of 05 Cms.</p> <p><b>In case of Female candidate-</b></p> <p>Height not less than 158 Cms. (155 Cms. For the candidates of Scheduled Tribes of the State of Gujarat)</p> <p>vi) Should not be colour blind and must possess good vision with or without Spectacles.</p> <p>vii) Possess Basic Knowledge of Computer as prescribed by the Government.</p> <p>viii) sufficient knowledge of English, Gujarati and Hindi Language.</p> |   |
| 16     | Bailiff              | Bailiff/ Process server (5200-20200 + Rs.1900) (Class III) | <p>i) 75% of Posts by Promotion, on the basis of efficiency and past performance</p> <p>ii) 25% of Posts by Direct Recruitment on the basis of Competitive Examination.</p> | For Promotion: Class IV Services (Class IV) (4440-7440+ Rs.1400) (4440-7440+ Rs.1300) | <p>Direct Recruitment:</p> <p>i) For direct recruitment, a candidate shall have attained the age of 18 years and must not have attained the age of 33 years on the date as specified in the advertisement</p> <p>ii) Must pass Higher Secondary Certificate Examination from the Board recognized by the Government or an equivalent Examination recognized as</p>   | Not less than 05 years in feeder cadre and must possess the qualifications -(ii) to(vi) prescribed for direct recruitment |

| Sr. No                               | Original Designation | Present Designation   | Mode of Recruitment   | Name of Feeder Cadre  | Minimum Qualification  | Experience if required                 |
|--------------------------------------|----------------------|---|-----------------------|---|--|--|
|                                      |                      |   |                       |   | such by the Government.<br><br>iii) Possess knowledge of driving Cycle/ Two Wheelers.<br><br>iv) Sufficient knowledge of Gujarati and / or Hindi Language.<br><br>v) Possess Basic Knowledge of Computer as prescribed by the Government.  |  |
| <b><u>NON-GAZETTED, CLASS IV</u></b> |                      |   |                       |   |  |  |
| 17                                   | Naik                 | Naik (4440-7440 + Rs. 1400) (Class IV)  | By Promotion          | Peon/ Watchman/ Home attendant- Domestic Attendant (4440-7440 + Rs.1300) (Class IV) | —  | Not less than 05 years in feeder cadre |
| 18                                   | Peon/ Watchman       | Peon/Watchman / Home attendant- Domestic Attendant (4440-7440 + Rs.1300) (Class IV) | By Direct Recruitment | —   | i) A candidate shall have attained the age of 18 years and must not have attained the age of 33 years on the date specified in the advertisement<br><br>ii) Must pass Secondary School Certificate Examination (SSCE) from the Board recognized by the Government or an equivalent Examination recognized as such by the Government.<br><br>iii) Possess skills relevant |  |

| Sr. No | Original Designation | Present Designation | Mode of Recruitment | Name of Feeder Cadre | Minimum Qualification   | Experience if required |
|--------|----------------------|---------------------|---------------------|----------------------|---|------------------------|
|        |                      |                     |                     |                      | to the job as may be prescribed by the High Court from time to time.<br><br>iv) Sufficient knowledge of Gujarati and / or Hindi Language. |                        |

17. An examinee must, in order to pass, obtain not less than 35 per cent of the total marks in each paper or in practical test or in oral test.

18. An examinee who fails to pass the examination but obtains 50 per cent or more marks in any paper or practical test or in oral test, shall be exempted from appearing for the same paper again.

**Note :-** A candidate who obtains 75 per cent of the total maximum marks without exemption shall be declared and notified to have passed the Examination 'with credit', and a note to that effect shall be made in his service book.

19. No candidate appearing for Departmental Examinations shall copy or attempt to copy out answer from any incriminating material indiscreetly or clandestinely or otherwise brought or smuggled in the Examination Hall. Any candidate found copying shall be debarred from reappearing at the said Examination for a period of 3 years next thereafter. Such candidate may also be liable to be proceeded against in departmental proceeding at the directions of the Honourable the Chief Justice for failing to maintain integrity.

By order and in the name of the Governor of Gujarat,

**H. H. VARMA,**  
Deputy Secretary to Government.

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# The Gujarat Government Gazette

## EXTRAORDINARY

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### PART IV-A

**Rule and Orders (Other than those published in Parts I, I-A, and I-L) made  
by the Government of Gujarat under the Central Acts**

#### PORTS AND TRANSPORT DEPARTMENT

#### Notification

Sachivalaya, Gandhinagar, 28<sup>th</sup> May, 2018.

#### MOTOR VEHICLES ACT, 1988.

**No. PT/2018/7/MTA/182006/2849/KH** : In exercise of the power conferred by clause (d) (i) of sub section (1) of Section 67 of Motor Vehicles act.1988 (act No.59 of 1988) the Government of Gujarat having regard to the provisions of clause (a) to (d) of the said sub section (1), hereby issues directions to the State Transport Authority and the Regional Transport Authority of Porbandar Region regarding fixing rates of fares for the stage carriages plying in the areas of Porbandar Nagarpalika specified in the schedule appended to this notification with effect from the date of publication of this notification in the official gazette namely:-

Fares (inclusive of the amount of tax on passenger, if any, levied or liable under the Bombay Motor Vehicles (Taxation of Passengers) Act. 1958 (Bom.LXVII of 1958) for the time being in force ) and freights for stage carriages playing in the areas and on the routes respectively specified in column 1 & 2 of the schedule appended hereto shall be subject to such maximum rates to fare and freight as specified against them in column 3 respectively of the said schedule :

Provided further that, fares mentioned as above has to be retained by Porbandar Nagarpalika and for that Porabandar Nagarpalika may hire the buses for city bus service on per kilometer basis and all the busses used for city bus services should be equipped with GPS.

Provided that, in the case of any journey undertaken by a student. If no such tax is liable, the fares for such journey shall be so adjusted as to exclude there from the amount of such tax.

Provided further that, the stage carriage operator shall not commit any breach of the carriage permit as per the Act and Rules made there under as amended from time to time. In case of such breach, stage carriage permit sanctioned shall be liable to be cancelled forthwith. Chief officer of Municipality shall be responsible for ensuring that the bus service is run only within Municipal limits.

### SCHEDULE

| Areas   | Routes   | Maximum fare<br>inclusive passenger Tax   | Freight  |
|---|--|---|--|
| 1   | 2  | 3   | 4  |
| <b>Porbandar</b><br>Nagarpalika areas which shall not be beyond (10) Ten kms. Limit having approved routes where stage carriages (city passenger bus service) are operated by <b>Trishul Enterprise bokhira Porbandar</b> | All routes, such routes serving the areas adjacent to <b>Porbandar</b> Nagarpalika, approved under the provision to Section 3 of the Gujarat Motor Vehicles (Taxation of Passengers) Act, 1958 | (i) Rs.6.00 (Six Rupees) per passenger for the first stage or part thereof.<br>(ii) Thereafter, an increase of Rs.2.00 (two rupees only) per passenger for the first stage or part thereof.<br>(iii) Thereafter, an increase of Rs.2.00 (two rupees) more per passenger per stage beyond first stage up to the 11 stages.<br>(Stage means a journey of two km.) | (i) Rs. 6.00 (six rupees only) per article of luggage for first two stages or part thereof.<br>(ii) Thereafter, an increase of Rs. 1.00 (One rupee) per article of luggage for each three stages.<br>Provided that article not exceeding 25 Kgs. in weight aggregate shall not be charged. |

By order and in the name of the Governor of Gujarat

**S. R. SONI,**

Under Secretary to Government.

### PORTS AND TRANSPORT DEPARTMENT

#### Notification

Sachivalaya, Gandhinagar, 28<sup>th</sup> May, 2018.

**No. PT/2018/8/MTA/182006/2849/KH :** In exercise of the powers conferred by the First proviso to sub section (i) of section 3 of the Bombay Motor Vehicles (Taxation of Passengers) Act, 1958 ( Bomb.LXVII of 1958 ) the government of Gujarat hereby

approves the routes to be operated in the area of Porbandar Nagarpalika specified in the schedule appended hereto for the purpose of the said proviso, as follow

### SCHEDULE

| Sr. no | Route Name                                      | Via   |
|--------|---|---|
| 1      | Sudama Chock to Orient                          | Friend Petroleum, Kamalabag, Narasang Tekari, Ashapura, Club, Orient Company  |
| 2      | Sudama Chock to Ramapeer Dwara (khat)           | Limada Chock Pata, Jubilee Water Tank, Gurukul College, Gayatri Temple, Suruchi School, Ramapeer Dwara  |
| 3      | Sudama Chock to Indira Nagar                    | Friend Petroleum, Kamalabag, Kamdar Kalyan Kendra, Birla Factory, Birla School, Indira Nagar  |
| 4      | Sudama Chock to Bokhira, via K.K Nagar to Aawas | Limda Chock Pata, Mama Temple (Puliya), Bokhira Water Tank, K.K.Nagar, Ramkrushna Mission, Aawas (Bokhira)  |
| 5      | Sudama Chock to Sandipane                       | Friend Petroleum, Kamalabag, Narasang Tekri, Madhavani College, Polytechnic, Sitaram Nagar, Sandeepani Mandeer  |
| 6      | Porbandai Darshan                               | Gayatri Mandir, Bharat Mandir - Tara Mandir, Mama Mandir (Puliya), Harish Cinema, Kirti mandir, Sudama Mandir, Chopati, Juribag, Kamalabag, Narasang Tekari, Madhavani College, Polytechnic, Sitaram Nagar, Sandipani Nagar, Return Rokadiya Hanuman Mandir |

By order and in the name of the Governor of Gujarat

**S. R. SONI,**

Under Secretary to Government.

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## PART IV-A

**Rules and Orders (Other than those published in Parts I, I-A, and I-L) made  
by the Government of Gujarat under the Central Acts**

### PORTS AND TRANSPORT DEPARTMENT

#### NOTIFICATION

Sachivalaya, Gandhinagar, 31<sup>st</sup> May, 2018.

#### INLAND VESSELS ACT, 1917.

**No. PT-9/2018/EOP-102016-G.129-GH-1:-** In exercise of the powers conferred by subsection (1) of section 4 of the Inland Vessels Act, 1917 (1 of 1917) and in supersession of all the notifications issued in this behalf, the Government of Gujarat hereby declares the places of survey as shown in column (3) of the Schedule appended hereto and appoints the officers as shown in column (2) of the said Schedule, to be the Surveyor for the purposes of the said Act, as under:

#### SCHEDULE

| Sr. No. | Officers  | Places of Survey                                 |
|---------|---|--|
| (1)     | (2)   | (3)  |
| 1       | Nautical Surveyor   | All the places of survey in the State of Gujarat |
| 2       | (i) Marine Engineer Officer (MEO Class - I) or, as the case may be, Marine Engineer Officer (MEO Class - II); and<br>(ii) Master Mariner (Foreign Going Master) | Magdalla (Surat) group of Ports                  |
| 3       | (i) Marine Engineer Officer (MEO Class - I) or, as the case may be, Marine Engineer Officer (MEO Class - II); and<br>(ii) Master Mariner (Foreign Going Master) | Bharuch group of Ports                           |
| 4       | (i) Marine Engineer Officer (MEO Class - I) or, as the case may be, Marine Engineer Officer (MEO Class - II); and<br>(ii) Master Mariner (Foreign Going Master) | Bhavnagar group of Ports                         |

| <b>Sr. No.</b> | <b>Officers</b>   | <b>Places of Survey</b>  |
|----------------|---|--------------------------|
| <b>(1)</b>     | <b>(2)</b>  | <b>(3)</b>               |
| 5              | (i) Marine Engineer Officer (MEO Class - I) or, as the case may be, Marine Engineer Officer (MEO Class - II); and<br>(ii) Master Mariner (Foreign Going Master) | Jafrabad group of Ports  |
| 6              | (i) Marine Engineer Officer (MEO Class - I) or, as the case may be, Marine Engineer Officer (MEO Class - II); and<br>(ii) Master Mariner (Foreign Going Master) | Veraval group of Ports   |
| 7              | (i) Marine Engineer Officer (MEO Class - I) or, as the case may be, Marine Engineer Officer (MEO Class - II); and<br>(ii) Master Mariner (Foreign Going Master) | Porbandar group of Ports |
| 8              | (i) Marine Engineer Officer (MEO Class - I) or, as the case may be, Marine Engineer Officer (MEO Class - II); and<br>(ii) Master Mariner (Foreign Going Master) | Okha group of Ports      |
| 9              | (i) Marine Engineer Officer (MEO Class - I) or, as the case may be, Marine Engineer Officer (MEO Class - II); and<br>(ii) Master Mariner (Foreign Going Master) | Jamnagar group of Ports  |
| 10             | (i) Marine Engineer Officer (MEO Class - I) or, as the case may be, Marine Engineer Officer (MEO Class - II); and<br>(ii) Master Mariner (Foreign Going Master) | Navlakhi group of Ports  |
| 11             | (i) Marine Engineer Officer (MEO Class - I) or, as the case may be, Marine Engineer Officer (MEO Class - II); and<br>(ii) Master Mariner (Foreign Going Master) | Mandavi group of Ports   |

By Order and in the name of the Governor of Gujarat,

**NILESH TRIVEDI,**

Deputy Secretary to Government.

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### PART IV-A

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by the Government of Gujarat under the Central Acts

#### LEGAL DEPARTMENT

#### Notification

Sachivalaya, Gandhinagar, 4<sup>th</sup> June, 2018

#### The Commission of Inquiry Act, 1952.

**No.: GK/ 21/2018/COI/102017/244/A:- WHEREAS**, the Government has under Government Notification, Legal Department No.GK/69/2017/COI/10/2017/244/A dated the 3<sup>rd</sup> October, 2017 as extended from time to time appointed a Commission of Inquiry under section 3 of the commission of Inquiry act, 1952 (60 of 1952) to inquire into the Patidar Anamat Andolan Samiti and other allied organizations agitating for reservation in education as well as in Government services for the persons belonging to Patidar Community since the year 2015.

**AND WHEREAS**, Shri Mahendrabhai H.Shah former District Judge was appointed as member of the said Commission, vide Notification No.GK/69/2017/COI/102017/244/A.

**AND WHERE AS**, Shri Mahendrabhai H.Shah has informed the Government that he may not be able to spare time because of his preoccupation in Gujarat Human Rights Commission;

**NOW, THEREFORE**, in the exercise of the powers conferred by section 3 of the commission of inquiry Act, 1952 (60 of 1952), the Government of Gujarat is hereby please to appoint Shri M.P. Gamara, former District Judge as member of the said commission.

By order and in the name of the Governor of Gujarat,

**H. R. SHAH,**

Deputy Secretary to Government.

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### PART IV-A

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by the Government of Gujarat under the Central Acts

### INDUSTRIES AND MINES DEPARTMENT

#### NOTIFICATION

Sachivalaya, Gandhinagar, 4<sup>th</sup> June, 2018.

#### Constitution of India.

NO.GU/2018/18/BHVKH/102006/2394/D1:- In exercise of the powers conferred by the proviso to article 309 of the Constitution of India, the Governor of Gujarat hereby makes the following rules further to amend the Gujarat Gazetted Officers in the Commissionerate of Geology and Mining (Departmental Examination) Rules, 2011, namely :-

1. These rules may be called the Gujarat Gazetted Officers in the Commissionerate of Geology and Mining (Departmental Examination) (Amendment) Rules, 2018.
2. In the Gujarat Gazetted Officers in the Commissionerate of Geology and Mining (Departmental Examination) Rules, 2011, in Appendix "A", under the heading, syllabus for Departmental Examination, for Paper -III and Paper - IV the following shall be substituted respectively :-

#### Paper-III

#### Marks-100

#### Duration-3 Hours

| Sr. No. | Subjects  |
|---------|---|
| 1       | The Mines and Minerals (Regulation and Development), Act, 1957.                             |
| 2       | The Mineral (other than Atomic and Hydro carbons Energy Minerals) Concession Rules, 2016.   |
| 3       | The Gujarat Minor Mineral Concession Rules, 2017.   |
| 4       | The Gujarat Mineral (Prevention of illegal Mining, Transportation and Storage) Rules. 2017. |
| 5       | The Mineral (Auction) Rules, 2015.  |

| <b>Sr. No.</b> | <b>Subjects</b>  |
|----------------|--|
| 6              | The Mines (Evidence of Mineral Content) Rules, 2015.   |
| 7              | The Mines and Minerals Contribution to district Mineral Foudation) Rules, 2015.                                    |
| 8              | The District Mineral Foudation Rules, 2016.  |
| 9              | The National Mineral Exploration Trust, 2015.  |
| 10             | The Mineral (Mining by Government Company) Rules, 2015.  |
| 11             | The Minerals (Transfer of Mining Lease Granted of otherwise than through auction for captive purpose) Rules, 2016. |

**Paper-IV****Marks-100****Duration-3 Hours**

| <b>Sr. No.</b> | <b>Subjects</b>  |
|----------------|--|
| 1              | The Mines Act, 1952 (Whole Act)  |
| 2              | The Mineral Conservation and Development Rules, 2017.  |
| 3              | The Metalliferous Mines Regulation, 1961<br>(Chapter-I (Preliminary), II (Returns, Notices and Records), VI (plans and sections), XI (Mines Workings). |
| 4              | The Grenite Conservation and Development Rules, 1999. (All Rules)  |
| 5              | The Marble Development and Conservation Rules, 2002. (All Rules)   |
| 6              | General Knowledge of Departmental Activities- (Laboratory Manual, Hand Book of Exploration only).  |
| 7              | EIA Notification, 2006.  |

By order and in the name of the Governor of Gujarat,

**D. G. CHAUDHARI,**  
Deputy Secretary to Government.

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### PART IV-A

**Rule and Orders (Other than those published in Parts I, I-A, and I-L) made  
by the Government of Gujarat under the Central Acts**

#### LEGAL DEPARTMENT

#### Notification

Sachivalaya, Gandhinagar, 5<sup>th</sup> June, 2018

#### The Commission of Inquiry Act, 1952

**No. GK/22/2018/COI/102017/49/A: WHEREAS,** the Government has under Government Notification legal Department No.GK/15/2017/COI/102017/49/A dated 16<sup>th</sup> march, 2017 appointed a Commission of Inquiry under section 3 of the commission of Inquiry act, 1952 (60 of 1952) to inquire in to a complaint in the incidents of rape, alleged to have been committed at various places, on a young woman of District Kutchch, during the period from August, 2015 to November, 2016 Which came to be registered with Nalia Police Station, vide I.C.R. No. 03/2017, District Kutchch on 25/01/2017 under Sections 354, 376, 365, 328, 343 and 120B of the Indian Penal Code.

**AND WHEREAS** the Commission was required to complete the inquiry and submit its report to the government of Gujarat as soon as possible but not later than three months from the date of its first sitting;

**AND WHEREAS** the said Commission has requested the government to extend its time limit up to 30<sup>th</sup> December, 2018 and the Government of Gujarat is of the opinion that the Commission should complete the inquiry and submit its report to the state Government on or before the 30<sup>th</sup> September, 2018;

**NOW, THEREFORE,** in exercise of the powers conferred by Section 3 of the Commissions of Inquiry Act, 1952 (60 of 1952), the Government of Gujarat hereby amends the Government

Notification, legal Department No.GK/15/2017/COI/102017/49A dated 16<sup>th</sup> march, 2017 as follow a namely:-

In the said notification, in paragraph 3, for words, figures and letters "**as soon as possible, but not later than three months from the date of its first sitting.**" the words, figures and letters "**on or before the 30<sup>th</sup> September, 2018.**" shall be substituted.

By order and in the name of the Governor of Gujarat,

**H. R. SHAH,**  
Deputy Secretary to Government.

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ગૃહ વિભાગ

અધિકારી

સચિવાલય, ગાંધીનગર, ૮મી નવેમ્બર, ૨૦૧૭.

ભારતનું સંવિધાન.

ક્રમાંક : ૭૭/૬૯/૨૦૧૭/જેએલએમ/૫૦૨૦૦૮/૫૦૮૩/જે :- ભારતના સંવિધાનના અનુચ્છેદ ૩૦૮ના પરંતુકથી મળેલી સત્તાની રૂએ, ગુજરાતના રાજ્યપાલ, આથી વહીવટી અધિકારી, વર્ગ-૨, (જેલ ખાતું) ભરતી નિયમો, ૨૦૧૫ વધુ સુધારવા નીચેના નિયમો કરે છે :-

૧. આ નિયમો વહીવટી અધિકારી, વર્ગ-૨, (જેલ ખાતું) ભરતી (સુધારા) નિયમો, ૨૦૧૭ કહેવાશે.
૨. વહીવટી અધિકારી, વર્ગ-૨, (જેલ ખાતું) ભરતી નિયમો, ૨૦૧૫માં, નિયમ રમાં, ખંડ (ક)માં, પેટા-ખંડ (૨) કમી કરવો.

ગુજરાતના રાજ્યપાલના હુકમથી અને તેમના નામે,

મહેન્દ્ર આર. સોની,  
સરકારના નાયબ સચિવ.



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### PART IV-A

Rules and Orders (Other than those published in Parts I, I-A, and I-L) made  
by the Government of Gujarat under the Central Acts

#### LABOUR AND EMPLOYMENT DEPARTMENT

##### Notification

Sachivalaya, Gandhinagar, 6<sup>th</sup> June, 2018.

#### THE APPRENTICES ACT, 1961.

**No. KHR-2018-128/TLM/122018/61960/R-2 :-** In exercise of the powers conferred by sub-section (1) of section 27 of the Apprentices Act, 1961 (52 of 1961), the Government of Gujarat hereby appoints the following officers as "Deputy Apprenticeship Advisers" and "Assistant Apprenticeship Advisers" as shown in Schedule I and Schedule II respectively appended hereto, working in the offices under the Department specified in column 2 having designation shown in column 3 of the said Schedules for their respective jurisdiction in addition to their regular duties, to assist the State Apprenticeship Adviser in the performance of his functions.

#### SCHEDULE - I

##### Deputy Apprenticeship Advisers

| Sr. No. | Name of Department   | Designation of Officer  |
|---------|--|---|
| 1       | 2  | 3   |
| 1       | Labour and Employment<br>Department<br><br>[ Department Proper ] | All Deputy Labour Commissioners under administrative control of the Commissionerate of Labour.<br>All Deputy Directors of Industrial Safety and Health under administrative control of the Directorate of Industrial Safety and Health.<br>All Deputy Directors of Boiler under administrative control of the Directorate of Boiler.<br>All Assistant Labour Commissioners under administrative control of the Commissionerate of Labour. |

| Sr. No. | Name of Department                                       | Designation of Officer   |
|---------|--|--|
| 1       | 2  | 3  |
| 2       | Industries and Mines Department                          | Regional Manager and All Executive Engineers, under administrative control of Gujarat Industrial Development Corporation. (GIDC)<br><br>General Manager of respective District Industries Centre (DIC) under administrative control of the Commissionerate of Industries.<br><br>All Geologists under administrative control of the Commissionerate of Geology and Mining.<br><br>General Manager, Tourism Corporation of Gujarat Limited, (TCGL) under administrative control of the TCGL.  |
| 3       | Education Department<br>(Higher and Technical Education) | Registrar of all Universities.<br>Principal of all Government Engineering, Polytechnic, Science, Commerce and Arts Colleges.   |
| 4       | Urban Development<br>and Urban Housing Department        | Deputy Municipal Commissioner of respective Municipal Corporations.<br>Superintending Engineer of Gujarat Housing Board.   |
| 5       | Energy and Petrochemicals<br>Department                  | 1. Deputy General Manager (HR)<br>Gujarat Urja Vikas Nigam Limited. (GUVNL)<br>2. Deputy General Manager (HR)<br>(1) Madhya Gujarat Vij Company Ltd<br>(MGVCL)<br>3. Deputy General Manager (HR)<br>Paschim Gujarat Vij Company Ltd.<br>(PGVCL)<br>4. Personnel Officer, Dakshin Gujarat Vij Company Ltd. (DGVCL)<br>5. Industrial Relations Officer, Madhya Gujarat Vij Company Ltd (MGVCL)<br>6. Deputy General Manager (HR) Gujarat State Electricity Corporation Ltd. (GSECL)<br>7. Personnel Officer, Gujarat Energy Transmission Corporation Ltd. (GETCO)<br>8. Chief Executive Officer of Gujarat Info Petro Ltd. (GIPL)<br>9. Chief Manager of Sabarmati Gas Ltd. (SGL)<br>10. Associate Vice President (HR), Gujarat Gas Ltd. (GGL) |
| 6       | Health and Family Welfare<br>Department                  | Chief District Medical Officer and Chief District Health Officer of respective District under administrative control of the Commissionerate of Health, Medical Services and Medical Education.<br>Assistant Commissioner (Drug Control); and Designated officer (Food Safety) under administrative control of the Commissionerate of Food and Drug Control Administration  |



| Sr. No. | Name of Department                                      | Designation of Officer  |
|---------|---|---|
| 1       | 2   | 3   |
| 7       | Ports and Transport Department                          | Assistant Port officer of respective Ports under administrative control the Gujarat Mari Time Board. (GMB)<br>Administrative Officer of respective Divisional Control Office of the Gujarat State Road Transport Corporation. (GSRTC) |
| 8       | Agriculture, Farmer Welfare and Co-operation Department | District Agriculture Officer of respective District under administrative control of the Directorate of Agriculture; All District Registrars of Co-operative Societies.  |
| 9       | Road and Building Department                            | Executive Engineers of all Divisions and Deputy Executive Engineers of all Sub Divisions under administrative control of the respective Circle offices of the Roads and Buildings Department.   |
| 10      | Home Department   | Deputy Superintendent of Police of respective District under administrative control of the Director General and Inspector General of Police.  |

**SCHEDULE-II****Assistant Apprenticeship Advisers**

| Sr. No. | Name of Department  | Designation of Officer   |
|---------|---|--|
| 1       | 2   | 3  |
| 1       | Labour and Employment Department<br>[ Department Proper ] | Employment Officer of respective District under administrative control of the Directorate of Employment and Training<br>Principals of all Government Industrial Training Institutes under administrative control of the Directorate of Employment and Training.<br>All Assistant Directors and Industrial Safety and Health Officers under administrative control of the Directorate of Industrial Safety and Health |
|         |   | All Government Labour Officers (Industry) under administrative control control of the Commissionerate of Labour<br>All Assistant Directors under administrative control of the Directorate of Boiler,<br>All Government Labour Officers (Agriculture) under administrative control of the Commissionerate of Rural Labour.   |
| 2       | Industries and Mines Department                           | All Deputy Executive Engineers of Gujarat Industrial Development Corporation. (GIDC)<br>Manager (Raw Material) of respective District industries Centre. (DIC)<br>All Assistant Geologists under administrative control of the Commissionerate of Geology and Mining.<br>Manager, Personnel and Operation. Tourism Corporation of Gujarat Limited. (TCGL) under administrative control of the TCGL.                  |

| Sr. No. | Name of Department                                    | Designation of Officer   |
|---------|---|--|
| 1       | 2   | 3  |
| 3       | Urban Development and Urban Housing Department        | All Assistant TDOs, Assistant Mangars (Tax), Assistant Health Officers, Deputy City Engineers; Inspectors, (Gumasta Dhara) and Food Inspectors of all Municipal Corporations under administrative control of respective Municipal Corporation.<br>Chief Officer of respective Nagarpalika under administrative control of the Commissionerate of Municipalities Administration.<br>Manager of respective Department of Metro link Express for Gandhinagar and Ahmedabad. [MEGA]  |
| 4       | Port and Transport Department                         | Assistant Road Transport Officer of respective District under administrative control of the Commissionerate of Transport,  |
| 5       | Agriculture, Farmer Welfare & Co-operation Department | All Veterinary Officers under administrative control of the Directorate of Animal Husbandry.   |
| 6       | Energy and Petrochemicals Department                  | 1. Assistant Secretary, Dakshin Gujarat Vij Company Ltd. (DGVCL)<br>2. Assistant Secretary, Madhya Gujarat Vij Company Ltd (MGVCL)<br>3. Assistant Secretary, Paschim Gujarat Vij Company Ltd. (PGVCL)<br>4. Assistant Secretary, Uttar Gujarat; Vij Company Ltd. (UGVCL)<br>5. Assistant Secretary, Gujarat Energy Transmission Corporation Ltd. (GETCO)<br>6. Personnel Officer (HR), Gujarat State Electricity Corporation Ltd. (GSECL)<br>7. Senior Manager, Gujarat State Petroleum Corporation (GSPC)<br>8. Manager, Gujarat State Petronet Ltd. (GSPL)<br>9. Manager, GSPL India Gasnet Ltd. (GIGL)<br>10. Manager, GSPL India Transco Ltd. (GITL)<br>11. Assistant Manager, Gujarat State Energy Generation Ltd. (GSEG)<br>12. Executive (HR), Gujarat Urja Vikas Nigam Ltd. (GUVNL) |

By order and in the name of the Governor of Gujarat,

**J. M. CHAUHAN,**  
Deputy Secretary to Government.

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સત્યમેવ જયતે

# The Gujarat Government Gazette

## EXTRAORDINARY

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### PART IV-A

**Rules and Orders (Other than those published in Parts I, I-A, and I-L) made by the Government of Gujarat under the Central Acts**

ગૃહ વિભાગ

જાહેરનામું

સચિવાલય, ગાંધીનગર, ૨૩મી જૂન, ૨૦૧૮.

ભારતનું સંવિધાન.

ક્રમાંક : જીજી/૩૦/૨૦૦૮/એમકેએમ/૧૦૨૦૧૭/૨૬૭/પીટી-૨/ઈ-૧ :- ભારતના સંવિધાનના અનુચ્છેદ ૩૦૮ના પરંતુકથી મળેલી સત્તાની રૂએ અને આ અર્થે કરેલા તમામ નિયમો રદ કરીને, ગુજરાતના રાજ્યપાલ, આથી સામાન્ય રાજ્ય સેવામાં, નાયબ નશાબંધી અને આબકારી નિયામક, વર્ગ-૧ ની જગા પર ભરતીનું નિયમન કરવા માટેની જોગવાઈ કરવા માટે નીચેના નિયમો કરે છે :-

૧. આ નિયમો નાયબ નશાબંધી અને આબકારી નિયામક, વર્ગ-૧, ભરતી નિયમો, ૨૦૧૦ કહેવાશે.
૨. સામાન્ય રાજ્ય સેવામાં, નાયબ નશાબંધી અને આબકારી નિયામક, વર્ગ-૧ ની જગા પરની નિમણૂક, જેણે,-

(ક) (૧) સામાન્ય રાજ્ય સેવામાં, નાયબ નશાબંધી અને આબકારી નિયામક, વર્ગ-૧ના સંવર્ગમાં ઓછામાં ઓછું પાંચ વર્ષ કામ કર્યું હોય; અને

(૨) ગુજરાત મુલ્કી સેવા કોમ્પ્યુટર ક્ષમતા તાલીમ અને પરીક્ષા નિયમો, ૨૦૦૬ની જોગવાઈઓ અનુસાર, કોમ્પ્યુટરની જાણકારી અંગેની લાયકી પરીક્ષા પાસ કરેલી હોય,

તેવી વ્યક્તિઓમાંથી ગુજરાત મુલ્કી સેવા વર્ગીકરણ અને ભરતી (સામાન્ય) નિયમો, ૧૯૬૭માં નિયત કર્યા પ્રમાણે “ખૂબ સારા” એ આધાર-ચિન્હ (બેન્ચમાર્ક)ના સિદ્ધાંતના આધારે બઢતીથી કરવી જોઈશે;

પરંતુ નિમણૂક આપનાર સત્તામંડળને એમ ખાતરી થાય કે ઉપર પેટા-ખંડ (૧)માં નિર્દિષ્ટ કરેલો અનુભવ ધરાવતી વ્યક્તિ બઢતી માટે ઉપલબ્ધ નથી અને તે મુદતથી ઓછી મુદતનો અનુભવ ધરાવતી વ્યક્તિને બઢતી આપીને પણ જગા ભરવાનું જાહેર હિતમાં જરૂરી છે, તો તે, કારણોની લેખિતમાં નોંધ કરીને, ઉપર પેટા-ખંડ (૧)માં નિર્દિષ્ટ કરેલી મુદતના બે તૃતીયાંશ કરતાં ઓછી નહિ તેટલી મુદતનો અનુભવ ધરાવતી વ્યક્તિને બઢતી આપી શકશે; અથવા

- (ખ) સીધી પસંદગીથી કરવી જોઈશે.
૩. નિયમ રમાં જણાવેલ જગા ઉપર સીધી પસંદગીથી નિમણૂકને પાત્ર થવા માટે ઉમેદવાર, -
- (ક) ૩૦ વર્ષથી વધુ ઉંમરનો હોવો જોઈશે નહિ;
- (ખ) (૧) ભારતમાં કેન્દ્રીય અથવા રાજ્ય અધિનિયમથી અથવા તે હેઠળ સ્થપાયેલી અથવા સંસ્થાપિત યુનિવર્સિટીઓ પૈકી કોઈપણમાંથી અથવા યુનિવર્સિટી ગ્રાન્ટ્સ કમિશન અધિનિયમ, ૧૯૫૬ની કલમ ૩ હેઠળ ડીમ્ડ યુનિવર્સિટી તરીકે માન્ય થયેલી અથવા તે તરીકે જાહેર થયેલી બીજી કોઈપણ શૈક્ષણિક સંસ્થાઓમાંથી મેળવેલી દ્વિતીય વર્ગની અનુસ્નાતકની પદવી ધરાવતો હોવો જોઈશે; અથવા સરકારે માન્ય કરેલ સમકક્ષ લાયકાત ધરાવતો હોવો જોઈશે;
- (૨) ગુજરાત મુલ્કી સેવા વર્ગીકરણ અને ભરતી (સામાન્ય) નિયમો, ૧૯૬૭માં ઠરાવ્યા પ્રમાણેની કોમ્પ્યુટરના ઉપયોગ અંગેની પાયાની જાણકારી ધરાવતો હોવો જોઈશે;
- (૩) ગુજરાતી અને/અથવા હિન્દીનું પૂરતું જ્ઞાન ધરાવતો હોવો જોઈશે;
- પરંતુ ગુજરાત મુલ્કી સેવા વર્ગીકરણ અને ભરતી (સામાન્ય) નિયમો, ૧૯૬૭ની જોગવાઈઓ અનુસાર અગાઉથી ગુજરાત સરકારની સેવામાં હોય તેવા ઉમેદવારની તરફેણમાં ઉપલી વય-મર્યાદા હળવી કરી શકાશે.
૪. સીધી પસંદગીથી નિમણૂક પામેલા ઉમેદવારે બે વર્ષની મુદત સુધી અજમાયશ પર રહેવું પડશે.
૫. સીધી પસંદગીથી નિમણૂક પામેલા ઉમેદવારે, તેની અજમાયશની મુદત દરમિયાન,
- (૧) રાજ્યપત્રિત અધિકારી પૂર્વ-સેવા તાલીમ અને પરીક્ષા નિયમો, ૧૯૭૦ની જોગવાઈઓ અનુસાર પૂર્વ-સેવા તાલીમ લેવી જોઈશે અને તાલીમાંત પરીક્ષા પાસ કરવી જોઈશે;
- (૨) ગુજરાત મુલ્કી સેવા કોમ્પ્યુટર ક્ષમતા તાલીમ અને પરીક્ષા નિયમો, ૨૦૦૬ની જોગવાઈઓ અનુસાર કોમ્પ્યુટરની જાણકારી અંગેની લાયકી પરીક્ષા પાસ કરવી જોઈશે;
- (૩) સરકાર ઠરાવે તેવી પોલીસ તાલીમ લેવી જોઈશે અને પોલીસ તાલીમ પરીક્ષા પાસ કરવી જોઈશે.
૬. પસંદ થયેલા ઉમેદવાર, સરકારે ઠરાવેલા નિયમો અનુસાર હિન્દી અથવા ગુજરાતી અથવા તે બંને પરીક્ષા પાસ કરવાની રહેશે.
૭. સીધી પસંદગીથી અથવા બઢતીથી નિમણૂક પામેલા ઉમેદવારે, સરકાર ઠરાવે તેવી તાલીમ લેવી જોઈશે અને તેવી પરીક્ષા પાસ કરવી જોઈશે.
૮. સીધી પસંદગીથી નિમણૂક પામેલા ઉમેદવારે, સરકાર ઠરાવે તેવા નમૂનામાં, તેટલી રકમના અને તેટલી મુદત માટે જામીનગીરી અને જામીનખત પૂરા પાડવા જોઈશે.

ગુજરાતના રાજ્યપાલના હુકમથી અને તેમના નામે,

વિજય બઘેકા,

સરકારના ઉપસચિવ.

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સરકારી મધ્યસ્થ મુદ્રણાલય, ગાંધીનગર.



सत्यमेव जयते

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## PART IV-A

**Rule and Orders (Other than those published in Parts I, I-A, and I-L) made  
by the Government of Gujarat under the Central Acts**

### LEGAL DEPARTMENT

#### Notification

Sachivalaya, Gandhinagar, 1<sup>st</sup> June, 2018

**No. GK/20/2018/SUP/102015/74-D (PART-1) :-** As per Finance Department Letter No:- PGR/102018/0/236/PAYCELL, Dated 28-05-2018, Government of Gujarat hereby amends the Legal Department Notification No. GK/10/2018/SUP/102015/74-D (PART-1) dated 21/04/2018, pertaining to implementation of the Interim Relief (Pay) for Subordinate Judicial Officer as recommend by the Second National Judicial Pay Commission.

In this Notification, in point No.4, the following para shall be added, namely:-

"Further, the interim relief shall be provided to the pensioners and family pensioners who have been retired on or after 01.01.2016, with effect from 01.01.2016. The interim relief shall be calculated on basic pension (i.e. 30% of basic pension)"

"Further, interim relief i.e. 30% of basic pension, shall not be applicable to pensioner/family pensioner whose pension/family pension has been revised as per the recommendation of 7th Pay Commission and implemented by the State Government."

By order and in the name of the Governor of Gujarat,

**H. H. VARMA,**  
Deputy Secretary to Government.

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सत्यमेव जयते

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## PART IV-A

**Rule and Orders (Other than those published in Parts I, I-A, and I-L) made  
by the Government of Gujarat under the Central Acts**

### LEGAL DEPARTMENT

#### Notification

Sachivalaya, Gandhinagar, 14<sup>th</sup> June, 2018

#### Constitution of India.

**No. GK/23/2018/LOR/102014/580/H:-** In exercise of the powers conferred by articles 165, 166 and the proviso to article 309 of the Constitution of India and all other powers enabling him in this behalf, the Governor of Gujarat hereby makes the following rules further to amend the Law Officers (Appointment and Conditions of Service) and Conduct of Legal Affairs of the Government Rules, 2009, namely:-

1. These rules may be called the Law Officers (Appointment and Conditions of Service) and Conduct of Legal Affairs of the Government (Amendment) Rules, 2018.
2. In the Law Officers (Appointment and Conditions of Service) and Conduct of Legal Affairs of the Government Rules, 2009 -
  - (i) in Schedule - B, after Sr. No. 1, the following Note shall be added, namely:-

"Note: The above prescribed rates of fees for appearance and drafting of petitions and replies (except admission/rule, final disposal, retainership and office expenses) shall monthly be payable subject to the actual fees or Rs.8,00,000/-, whichever is less."
  - (ii) in Schedule - B1, in paragraph A, after Sr. No. 1, the following Note shall be inserted, namely:-

"Note: The above prescribed rates of fees (except the retainer fees) shall monthly be payable subject to the actual fees or Rs. 1,50,000/-, whichever is less."
  - (iii) in Schedule - B1, in paragraph B, the following Note shall be added at the end, namely:-

"Note: The above prescribed rates of fees (except the retainer fees) shall monthly be payable subject to the actual fees or Rs. 1,40,000/-, whichever is less."

- (iv) in Schedule - C, in paragraph A, after Sr. No.3, the following Note shall be inserted, namely:-

"Note: The above prescribed rates of fees shall be payable subject to a limit of Rs.5000/- and Rs.3000/-, respectively per day except the retainer fees."

- (v) in Schedule - C, in paragraph B, after Sr. No.(v), for the existing Note, the following Note shall be substituted, namely:-

"Note: The above prescribed rates of fees shall be payable subject to a limit of Rs.5000/- and Rs.3000/-, respectively per day except the retainer fees."

- (vi) in Schedule - D, in paragraph (A), after Sr. No. (ii), the following Note shall be inserted, namely:-

"Note: The above prescribed rates of fees shall be payable subject to a limit of Rs.6000/- per day except the retainer fees."

- (vii) in Schedule - D, in paragraph (B), after Sr. No. (ii), the following Note shall be inserted, namely:-

"Note: The above prescribed rates of fees shall be payable subject to a limit of Rs.4000/- per day except the retainer fees."

- (viii) in Schedule - D, in paragraph (C), after Sr. No. (ii), the following Note shall be inserted, namely :-

"Note: The above prescribed rates of fees shall be payable subject to a limit of Rs.6000/- per day."

By order and in the name of the Governor of Gujarat,

**D. M. BHABHOR,**

Deputy Secretary to Government.

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# The Gujarat Government Gazette

## EXTRAORDINARY

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Separate paging is given to this Part in order that it may be filed as a Separate Compilation.

### PART IV-A

**Rules and Orders (Other than those published in Parts I, I-A, and I-L) made  
by the Government of Gujarat under the Central Acts**

**SOCIAL JUSTICE AND EMPOWERMENT DEPARTMENT**

#### **Notification**

Sachivalaya, Gandhinagar, 19<sup>th</sup> June, 2018.

#### **CONSTITUTION OF INDIA.**

**NO.GHKH/12/2018/MKM/102014/697890/CHH :-** In exercise of the powers conferred by the proviso to article 309 of the Constitution of India and in supersession of all the rules made in this behalf, the Governor of Gujarat hereby makes the following rules to provide for regulating recruitment to the post of Head Master/Principal, Class III, in the Schools for the Physically Handicapped, in the subordinate service under the Directorate of Social Defence, Gujarat State, namely:-

1. These rules may be called the Head Master/Principal, Class III, in the Schools for the Physically Handicapped, Recruitment Rules, 2018.
2. Appointment to the post of Head Master/Principal, Class III, in the Schools for the Physically Handicapped, in the subordinate service of the Directorate of Social Defence, Gujarat State shall be made either, -
  - (a) by promotion of a person of proved merit and efficiency from amongst the persons, who, -
    - (i) have worked for not less than five years in the cadre of Assistant Teacher in the Subordinate Service under the Directorate of Social Defence;
    - (ii) have passed departmental examination as may be prescribed by the Government; and
    - (iii) have passed the qualifying examination for computer knowledge in accordance with the provisions of the Gujarat Civil Service Computer Competency Training and Examination Rules, 2006 :



Provided that where the appointing authority is satisfied that a person having the experience specified in sub-clause (i) above is not available for promotion and that it is necessary in the public interest to fill up the post by promotion even of a person having experience for a lesser period; it may, for reasons to be recorded in writing, promote such person who possesses experience of a period of not less than two-thirds of the period specified in sub-clause (i) above; or

(b) by direct selection.

3. To be eligible for appointment by direct selection to the post mentioned in rule 2, a candidate shall,

(a) not be more than 42 years of age :

Provided that the upper age limit may be relaxed in favour of the candidate who is already in the service of the Government of Gujarat in accordance with the provisions of the Gujarat Civil Services Classification and Recruitment (General) Rules, 1967;

(b) possess, -

(i) a bachelor degree obtained from any of the Universities established or incorporated by or under the Central or a State Act in India; or any other educational Institution recognised as such or declared to be deemed as a University under section 3 of the University Grants Commission Act, 1956; or possess an equivalent qualification recognised by the Government; and

(ii) (a) For Blind School,

Special bachelor degree in education (Visually Impaired) obtained from any of the Universities established or incorporated by or under the Central or a State Act in India; or any other educational institution recognised as such or declared to be deemed as a University under section 3 of the University Grants Commission Act, 1956; or Diploma in the Special Education (Visually Impaired) obtained from a institution recognised by the Rehabilitation Council of India.

(b) For Deaf and Dumb School, -

Special bachelor degree in education (Hearing Impaired) degree obtained from any of the Universities established or incorporated by or under the Central or a State Act in India; or any other educational institution recognised as such or declared to be deemed as a University under section 3 of the University Grants Commission Act, 1956; or Diploma in the Special Education (Hearing Impaired) obtained from an institution recognised by the Rehabilitation Council of India.

(c) For Home for Mentally Deficient Children, -

Special bachelor degree in education (Hearing Impaired) degree obtained from any of the Universities established or incorporated by or under the Central or a State Act in India; or any other educational institution recognised as such or declared to be deemed as a University under section 3 of the University Grants Commission Act,

1956; or Diploma in the Special Education (Hearing Impaired) obtained from an institution recognised by the Rehabilitation Council of India.

(d) For Home for Crippled Children, -

bachelor degree in education degree obtained from any of the Universities established or incorporated by or a under the Central or State Act in India; or any other educational institution recognised as such or declared to be deemed as a University under section 3 of the University Grants Commission Act, 1956;

(c) (i) have about five years experience on the post of Assistant Teacher, Class-III, in the Schools for the Physically Handicapped, in the subordinate service of the Directorate of Social Defence; or

(ii) have about five years teaching experience in the Schools for the Physically Handicapped recognized by Government.

(iii) the basic knowledge of Computer Application as prescribed in Gujarat Civil Services Classification and Recruitment (General) Rules, 1967;

(iv) adequate knowledge of Gujarati or Hindi or both.

4. The provisions of rule 9 A of the Gujarat Civil Services Classification and Recruitment (General) Rules, 1967 shall be applicable in respect of the candidate appointed by direct selection.
5. The candidate appointed by direct selection shall be required to pass the departmental examination in accordance with the rule prescribed by the Government.
6. The candidate shall be required to get himself registered with the Rehabilitation Council of India at the time of his application for direct selection, if he is not so registered.
7. The candidate appointed either by direct selection or by promotion shall be required to undergo such training and to pass such examination as may be prescribed by the Government.
8. The candidate appointed by direct selection shall be required to furnish a security and surety bond in such form, for such amount and for such period as may be prescribed by Government.

By order and in the name of the Governor of Gujarat,

**G. B. VANZARA,**

Under Secretary to Government.

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## EXTRAORDINARY

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### PART IV-A

**Rules and Orders (Other than those published in Parts I, I-A, and I-L) made  
by the Government of Gujarat under the Central Acts**

#### FOREST AND ENVIRONMENT DEPARTMENT

#### Notification

Sachivalaya, Gandhinagar, 20<sup>th</sup> June, 2018

#### Noise Pollution (Regulation & Control) Rules, 2000 and Amended thereof

**No. GNV-2018- (4)-ENV-10-2014-133- T cell:** In pursuance to the sub-rule (3) of Rule 5 of the Noise Pollution (Regulation & Control) Rules, 2000 and amended thereof, the Government of Gujarat hereby earmarks the following days of festive/ religious/ cultural occasions for the calendar year 2018, permitting the use of loud speakers and/ or public address systems between 10.00 PM to 12.00 midnight:

| Sr. No.      | Festive Occasions                                   | No. of days |
|--------------|---|-------------|
| 1.           | International Yoga Day<br>(time 4:00 AM to 6:00 AM) | 1           |
| 2.           | Janmashtami   | 1           |
| 3.           | Independence Day                                    | 1           |
| 4.           | Navratri  | 8           |
| 5.           | Dusheraa  | 1           |
| 6.           | Kankaria Carnival                                   | 1           |
| <b>Total</b> |   | <b>13</b>   |

**Note :-** An area comprising not less than 100 metres around hospitals, educational institutions and courts may be declared as silence area / zone.

Remaining two days out of Fifteen days in a calendar year 2018, is kept reserved for any other function/ occasion/ celebration (cultural or religious) that the State Government may think fit to notify for this purpose at a later stage. If the celebrations on Independence Day could be concluded in the State by 10:00 PM, relaxation against such day would be allotted to some other religious/ festive occasions, as may be decided by the State Government. The date/s for the celebration of the above day/s shall be the one decided by the State Government as a State Celebration.

By order and in the name of the Governor of Gujarat,

**K. C. MISTRY,**  
Director (Environment) and Additional  
Secretary to the Government.



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## **PART IV-A**

**Rules and Orders (Other than those published in Parts I, I-A, and I-L) made  
by the Government of Gujarat under the Central Acts**

### **LEGAL DEPARTMENT**

#### **Notification**

Sachivalaya, Gandhinagar, 28<sup>th</sup> June, 2018

**Ref:-** (1) Legal Department Notification No.GK/69/2017/COI/10 2017/244/A Dated: 3-10-2017.

(2) Legal Department Notification No.GK/21/2018/COI/10 2017/244/A Date: 4-06-2018.

#### **The Commission of Inquiry Act, 1952.**

**No.GK/24/2018/COI/102017/244/A:-** WHEREAS, the Government has under Government Notification, Legal Department No.GK/69/2017/COI/102017/244/A dated the 3<sup>rd</sup> October, 2017 and extended from time to time appointed a Commission of Inquiry under section 3 of the Commission of Inquiry act, 1952 (60 of 1952) to inquire into the Patidar Anamat Andolan Samiti and other allied organizations agitating for reservation in education as well as in Government services for the persons belonging to Patidar Community since the year 2015.

In exercise of the powers conferred by section 3 of the Commission of Inquiry act, 1952 (60 of 1952), the Government of Gujarat is hereby pleased to amend the Government Notification, Legal Department NO.GK/69/2017/COI/102017/244/A, dated 3<sup>rd</sup> October, 2017 (hereinafter referred to as "the said notification") as follows, namely:-

In the said notification,-

(1) in paragraph 2,-

- (i) in clause (1), for the word and figures "25<sup>th</sup> August, 2015 and thereafter" the words and figures "25<sup>th</sup> August, 2015 to 30<sup>th</sup> September, 2015" shall be substituted;
- (ii) in clause (2), for the words and figures "25<sup>th</sup> August, 2015 at GMDC Ground, Ahmedabad and thereafter", the words and figures "25<sup>th</sup> August, 2015 to 30<sup>th</sup> September, 2015 at GMDC Ground, Ahmedabad and at various places in the state" shall be substituted.

By order and in the name of the Governor of Gujarat,

**H. R. SHAH,**  
Deputy Secretary to Government.



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### PART IV-A

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by the Government of Gujarat under the Central Acts

#### FINANCE DEPARTMENT,

#### NOTIFICATION

Sachivalaya, Gandhinagar, 2<sup>nd</sup> July, 2018.

#### Constitution of India.

**No.GN-58/VVK/122018/265811/Th3:-** In exercise of the powers conferred by the proviso to article 309 of the Constitution of India and in supersession of all the rules made in this behalf, the Governor of Gujarat hereby makes the following rules to provide for regulating recruitment to the post of Assistant Commissioner of State Tax, Class-I under the Commissionerate of Goods and Services Tax, Gujarat State namely:-

1. These rules may be called the Assistant Commissioner of State Tax, Class-I under the Commissionerate of Goods and Services Tax, Recruitment Rules, 2018.
2. Appointment to the post of Assistant Commissioner of State Tax, Class-I in the Gujarat Goods and Services Tax Services under the Commissionerate of Goods and Services Tax, Gujarat State, shall be made either ,-

[A](a) by promotion of a person of proved merit and efficiency from amongst the persons who,-

- (i) have worked for not less than eight years in the cadre of State Tax officer, Class II in the Gujarat Goods and Services Tax Services under the Commissionerate of Goods and Services Tax, Gujarat State and;
- (ii) have passed the qualifying examination for computer knowledge in accordance with the provisions of the Gujarat Civil Services Computer Competency Training and Examination Rules 2006:

Provided that where the appointing authority is satisfied that a person having the experience specified in Sub-clause (i) above is not available for promotion and that it is necessary in the public interest to fill up the post by promotion even of a person having experience for a lesser period; it may, for reasons to be recorded in writing, promote such person who possesses experience of a period of not less than two-thirds of the period specified in sub-clause (i) above; or

(b) by promotion on the basis of the Special Competitive Examination held by the Gujarat Public Service Commission of a person of proved merit and efficiency from amongst the persons, who,—

- (i) have worked for not less than five years in the cadre of State Tax Officer, Class II in the Gujarat Goods and Services Tax Services under the Commissionerate of Goods and Services Tax, Gujarat State;
- (ii) possess a Bachelor's degree obtained from any of the Universities established or incorporated by or under the Central or a State Act in India; or any other educational institution declared to be a deemed University under section 3 of the University Grants Commission Act, 1956 or possess an equivalent qualification recognised by the Government;
- (iii) have passed the qualifying examination for computer knowledge in accordance with the provisions of the Gujarat Civil Services Computer Competency Training and Examination Rules, 2006; and
- (iv) have passed the Special Competitive examination in accordance with the rules prescribed by the Government; or

(B) on the basis of the result of a competitive examination held for the purpose.

3. The appointment by promotion, on the basis of the special competitive examination and on the basis of the result of a competitive examination held for the purpose under the clauses (a) and (b) of sub-rule (A) of rule 2 and sub-rule (B) of rule 2 shall be made in the ratio of 6:1:3 respectively.
4. To be eligible for appointment on the basis of the result of a competitive examination held for the purpose to the post mentioned in rule 2, a candidate shall,—
  - (a) not be more than 35 years of age;
  - (b) possess a Bachelor's degree obtained from any of the Universities established or incorporated by or under the Central or a State Act in India; or any other educational institution declared to be a deemed University under section 3 of the University Grants Commission Act, 1956 or possess an equivalent qualification recognised by the Government;
  - (c) possess the basic knowledge of computer application as prescribed in the Gujarat Civil Services Classification and Recruitment (General) Rules 1967; and
  - (d) possess adequate knowledge of Gujarati or Hindi or both.
5. The candidate appointed on the basis of the result of a competitive examination held for the purpose shall be on probation for a period of two years.

6. The candidate appointed on the basis of the result of a competitive examination held for the purpose, during his probation period shall be required to undergo pre-service training and to pass the post-training examination in accordance with the provisions of the Gazetted Officer's Pre-service Training and Examination Rules, 1970.
7. The candidate appointed on the basis of the result of a competitive examination held for the purpose, during his probation period shall be required to pass the qualifying examination for computer knowledge in accordance with the provisions of the Gujarat Civil Services Computer Competency Training and Examination Rules, 2006.
8. The selected candidate shall be required to pass the departmental examination and an examination in Hindi or Gujarati or both in accordance with the rules prescribed by the Government.
9. The candidate appointed either on the basis of the result of a competitive examination held for the purpose or by promotion shall require to undergo such training and pass such examination as may be prescribed by the Government.
10. The selected candidate shall be required to furnish a security and surety bond in such form, for such amount and for such period as may be prescribed by the Government.

By order and in the name of the Governor of Gujarat,

**K. H. PATHAK,**

Deputy Secretary to Government.

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### PART IV-A

**Rules and Orders (Other than those published in Parts I, I-A, and I-L) made  
by the Government of Gujarat under the Central Acts**

#### INDUSTRIES AND MINES DEPARTMENT

##### Notification

Sachivalaya, Gandhinagar, 27<sup>th</sup> June, 2018.

#### CONSTITUTION OF INDIA

**No. GU/2018/19/BRT/102008/243/D-3 :-** In exercise of the powers conferred by the proviso to article 309 of the Constitution of India and in supersession of all the rules made in this behalf, the Governor of Gujarat hereby makes the following rules to provide for regulating recruitment to the post of Administrative Officer, Class II, in the Gujarat Mining Service, under the Commissionerate of Geology and Mining, Gujarat State, namely:-

1. These rules may be called the Administrative Officer, Class II in Gujarat Mining Service, Recruitment Rules, 2018.
2. Appointment to the post of Administrative Officer, Class II in the Gujarat Mining Service, under the Commissionerate of Geology and Mining, Gujarat State, shall be made either;
  - (a) by promotion of a person of proved merit and efficiency from amongst the persons, who;
    - (i) have worked for not less than seven years in the cadre of Office Superintendent, Class III, in the subordinate services of the Commissionerate of Geology and Mining;
    - (ii) have passed the prescribed departmental examination;
  - and



- (iii) have passed the qualifying examination for computer knowledge in accordance with the provisions of the Gujarat Civil Services Computer Competency Training and Examination Rules, 2006:

Provided that where the appointing authority is satisfied that a person having an experience specified in sub-clause (i) above is not available for promotion and that it is necessary in the public interest to fill up the post by promotion even of a person having experience for a lesser period; it may, for reasons to be recorded in writing, promote such person who possesses experience of a period of not less than two-thirds of the period specified in subclause (i) above; or

- (b) by direct selection.

3. To be eligible for appointment by direct selection to the post mentioned in rule 2, a candidate shall;

- (a) not be more than 40 years of age:

Provided that the upper age limit may be relaxed in favour of a candidate who is already in the service- of the Government of Gujarat in accordance with the provisions of the Gujarat Civil Services Classification and Recruitment (General) Rules, 1967:

Provided further that nothing contained in clause (b) of sub-rule (9) of rule 8 of the Gujarat Civil Services Classification and Recruitment (General) Rules, 1967 shall be applicable in so far as relaxation of upper age limit as prescribed above is concerned.

- (b) possess a degree obtained from any of the Universities established or incorporated by or under the Central or State Act in India; or any other educational institutions recognised as such or declared to be a deemed as a University under section 3 of the University Grants Commission Act, 1956; or possess an equivalent qualification recognised by the Government;
- (c) have about five years experience of administration in the Government/Local Bodies/Government Undertaking/Board/ Corporation/Limited company established under the Companies Act, 2013 or University on the post which can be considered equivalent to the post not below the rank of Head Clerk, class III in the subordinate services of the Commissionerate of Geology and Mining under the Industries and Mines Department;
- (d) have the basic knowledge of computer application as prescribed in the Gujarat Civil Services Classification and Recruitment (General) Rules, 1967; and
- (e) have adequate knowledge of Gujarati or Hindi or both.

4. The candidate appointed by direct selection shall be on probation for a period of two years.

5. The candidate appointed by direct selection shall, during his probation period, be required to undergo pre-service training and to pass the post-training examination in accordance with the provisions of the Gazetted Officer Pre-service Training and Examination Rules, 1970.
6. The candidate appointed by direct selection shall, during his probation period be required to pass the qualifying examination for computer knowledge in accordance with the provisions of the Gujarat Civil Services Computer Competency Training and Examination Rules, 2006.
7. The candidate appointed by direct selection shall be required to pass the departmental examination and an examination in Gujarati or Hindi or both in accordance with the rules prescribed by the Government.
8. The candidate appointed either by promotion or by direct selection shall have to undergo such training and to pass such examination as may be prescribed by the Government.
9. The candidate appointed by direct selection shall be required to furnish a security and surety bond in such form, for such amount and for such period as may be prescribed by the Government.

By order and in the name of the Governor of Gujarat,

**D.G. CHAUDHARI,**  
Deputy Secretary to Government.

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### PART IV-A

Rule and Orders (Other than those published in Parts I, I-A, and I-L) made  
by the Government of Gujarat under the Central Acts

#### FOOD, CIVIL SUPPLIES AND CONSUMER AFFAIRS DEPARTMENT

##### Notification

Sachivalaya, Gandhinagar, 20<sup>th</sup> June, 2018

#### CONSUMER PROTECTION ACT, 1986.

**No. GTH/2018/16/CPA/102018/284879/D :-** In exercise of the powers conferred by clause (a) of section 9 read with sub-section (1) (a), 1(A) & 2 of section-10 of the Consumer Protection Act, 1986 as amended in 1993 and 2002, Government of Gujarat hereby accepts the resignation of Shri. R. M. Parmar, President of Consumer Disputes Redressal Forum, Ahmedabad(Rural) with effect from dated 10/06/2018 after office hours.

By order and in the name of the Governor of Gujarat,

**P. N. MEHTA,**

Section Officer,

Food, Civil Supplies & Consumer Affairs Department.

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by the Government of Gujarat under the Central Acts

#### FOOD, CIVIL SUPPLIES AND CONSUMER AFFAIRS DEPARTMENT

##### Notification

Sachivalaya, Gandhinagar, 22<sup>nd</sup> June, 2018

#### CONSUMER PROTECTION ACT, 1986.

No. GTH/2018/17/CPA/102018/334181/D :- In exercise of the powers conferred by clause (1/3) of section 10 of the Consumer Protection Act, read with Gujarat Consumer Protection Rules 1988 Section 3(5-D & E). Government of Gujarat has decided to terminate the services of Ms. Lata Bathar non-judicial member of Consumer Disputes Redressal Forum Banaskantha with immediate effect, As her services are not satisfactory.

By order and in the name of the Governor of Gujarat,

**M. Z. SHROFF,**

Under Secretary to Government,

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#### FOOD, CIVIL SUPPLIES AND CONSUMER AFFAIRS DEPARTMENT

##### Notification

Sachivalaya, Gandhinagar, 25<sup>th</sup> June, 2018

#### CONSUMER PROTECTION ACT, 1986.

**No. GTH/2018/18/CPA/102018/320138/D :-** In exercise of the powers conferred by clause (a) of section 9 read with sub-section (1) (a), 1(A) & 2 of section-10 of the Consumer Protection Act, 1986 as amended in 1993 and 2002, Government of Gujarat hereby accepts the resignation of Mr. Anilkumar B. Parmar, Member of Consumer Disputes Redressal Forum, Surat(Main) with effect from dated 30/06/2018 after office hours.

By order and in the name of the Governor of Gujarat,

**P. N. MEHTA,**

Section Officer,

Food, Civil Supplies & Consumer Affairs Department.

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### PART IV-A

Rule and Orders (Other than those published in Parts I, I-A, and I-L) made  
by the Government of Gujarat under the Central Acts

#### HOME DEPARTMENT (SPECIAL)

#### NOTIFICATION

Sachivalaya, Gandhinagar, 7<sup>th</sup> July, 2018.

#### THE CONSERVATION OF FOREIGN EXCHANGE AND PREVENTION OF SMUGGLING ACTIVITIES ACT, 1974.

No.GG/52/2018/SB-III/PAS/1099/726 (2) **Part-I:-** in exercise of the powers, conferred by **section 8 THE CONSERVATION OF FOREIGN EXCHANGE AND PREVENTION OF SMUGGLING ACTIVITIES ACT, 1974**, the Government of Gujarat is pleased to extend the term of following Advisory Board under the Chairmanship of Hon'ble Mr. Justice (Retd.) **H. K. Rathod**, for a period of **one (1) year with effect from 9<sup>th</sup> August, 2018.**

Hon'ble Mr. Justice (Retd. High Court Judge) H. K. Rathod (Chairman)

Hon'ble Mr. Justice (Retd. High Court Judge) B. N. Mehta (Member)

Hon'ble Mr. Justice (Retd. High Court Judge) J. C. Upadhyay (Member)

By order and in the name of the Governor of Gujarat,

**PANKAJ DAVE,**

Under Secretary to Government.

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by the Government of Gujarat under the Central Acts**

### HOME DEPARTMENT (SPECIAL)

#### NOTIFICATION

Sachivalaya, Gandhinagar, 7<sup>th</sup> July, 2018.

#### THE NATIONAL SECURITY ACT, 1980.

**No.GG/53/2018/SB-III/PAS/1099/726 (3) Part-I:-** in exercise of the powers, conferred by **section 9** of THE NATIONAL SECURITY ACT, 1980, the Government of Gujarat is pleased to extend the term of following Advisory Board under the Chairmanship of Hon'ble Mr. Justice (Retd.) **H. K. Rathod**, for a period of **one (1) year with effect from 9<sup>th</sup> August, 2018.**

Hon'ble Mr. Justice (Retd. High Court Judge) H. K. Rathod (Chairman)

Hon'ble Mr. Justice (Retd. High Court Judge) B. N. Mehta (Member)

Hon'ble Mr. Justice (Retd. High Court Judge) J. C. Upadhyay (Member)

By order and in the name of the Governor of Gujarat,

**PANKAJ DAVE,**

Under Secretary to Government.

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#### HOME DEPARTMENT (SPECIAL)

#### NOTIFICATION

Sachivalaya, Gandhinagar, 7<sup>th</sup> July, 2018.

#### THE PREVENTION OF ILLICIT TRAFFIC IN NARCOTIC DRUGS AND PSYCHOTROPIC SUBSTANCES ACT, 1988.

No.GG/54/2018/SB-III/PAS/1099/726 (4) **Part-I:-** in exercise of the powers, conferred by **section 9** of The Prevention of Illicit Traffic in Narcotic Drugs and Psychotropic Substances Act, 1988, the Government of Gujarat is pleased to extend the term of following Advisory Board under the Chairmanship of Hon'ble Mr. Justice (Retd.) **H. K. Rathod**, for a period of **one (1) year with effect from 9<sup>th</sup> August, 2018.**

Hon'ble Mr. Justice (Retd. High Court Judge) H. K. Rathod (Chairman)

Hon'ble Mr. Justice (Retd. High Court Judge) B. N. Mehta (Member)

Hon'ble Mr. Justice (Retd. High Court Judge) J. C. Upadhyay (Member)

By order and in the name of the Governor of Gujarat,

**PANKAJ DAVE,**

Under Secretary to Government.

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**Rules and Orders (Other than those published in Parts I, I-A, and I-L) made  
by the Government of Gujarat under the Central Acts**

### FOREST AND ENVIRONMENT DEPARTMENT

#### Notification

Sachivalaya, Gandhinagar, 30<sup>th</sup> June, 2018.

#### Indian Forest Act, 1927 (XVI OF 1927)

GVN/2018-(05)/JJM/15-11/2017/GSF-02/F.- In Exercise of the Powers conferred by the Section-20 of the Indian Forest Act, 1927(XVI OF 1927) in its Application to the State of Gujarat the Government of Gujarat is pleased with reference of the Government Forest and Environment Department Notification No:-GVN-2000/(302)/JJM/102000/1267/K- dated : 21/12/2000 Published in Gujarat Government Gazette Part : I dated:- 27/12/2000 on Pages 426-1 to 426-2 declare the land in Dhoraji Taluka of Rajkot District specified in the schedule here under appended, to be "RESERVE FOREST" with effect from the date of issue of this Notification.

#### SCHEDULE

Taluka : Dhoraji

District : Rajkot

| Sr. No. | Name of the area | Survey No.   | AREA         |                | Boundaries   |
|---------|------------------|--------------|--------------|----------------|--|
|         |                  |              | A.G.         | H.A.           |  |
| 1       | 2                | 3            | 4            | 5              | 6  |
| 1       | Chichod          | 143/4        | 10.32        | 4.37.06        | North : S. No.143/2 & 143/3<br>East : S. No.144<br>South : S. No. 143/6 & 143/5<br>West : Boundary of Village Patanvav |
| 2       | Chichod          | 143/6        | 2.22         | 1.03.02        | North : S. No.143/4<br>East : S. No.144<br>South : S. No. 143/5<br>West : S. No. 143/4 & 143/5                         |
|         |                  | <b>TOTAL</b> | <b>13.14</b> | <b>5.40.08</b> |  |

By order and in the name of the Governor of Gujarat,

**MANISH C. SHAH,**  
Under Secretary to Government.

## વન અને પર્યાવરણ વિભાગ

## જાહેરનામું

સચિવાલય, ગાંધીનગર, ૩૦મી જૂન, ૨૦૧૮.

ક્રમાંક : ગવન/૨૦૧૮-(૦૫)-જજમ-૧૫-૧૧/૨૦૧૭/જીએસએફ-૦૨/એફ.- ગુજરાત રાજ્યને લાગુ હોય તેટલે સુધી, સને ૧૯૨૭ના ભારતના જંગલો બાબતોના (સને ૧૯૨૭ના ૧૬માં) અધિનિયમની કલમ-૨૦ થી મળેલા અધિકારો અન્વયે ગુજરાત સરકાર ગુજરાત રાજ્યપત્ર ભાગ-૧ ની તા. ૨૧-૧૨-૨૦૦૦ના પાના નં. ૪૨૬-૧ થી ૪૨૬-૨ ઉપર પ્રસિધ્ધ કરેલી તા. ૨૭-૧૨-૨૦૦૦ ના વન અને પર્યાવરણ વિભાગની અધિસૂચના ક્રમાંક : ગવન-૨૦૦૦/(૩૦૨)/જજમ/૧૦૨૦૦૦/૧૨૬૭/ક ના અનુસંધાનમાં આ સાથે જોડેલી અનુસૂચિત નિર્દિષ્ટ કરેલ રાજકોટ જિલ્લાના ધોરાજી તાલુકાની જમીનને આ અધિસૂચના પ્રસિધ્ધ થયાની તારીખથી 'અનામત જંગલ' તરીકે જાહેર કરે છે.

## અનુસૂચિ

તાલુકો : ધોરાજી

જિલ્લો : રાજકોટ

| અ. નં. | ગામનું નામ | સર્વે નંબર | ક્ષેત્રફળ |          | ચર્તુ:સીમા  |
|--------|------------|------------|-----------|----------|---|
|        |            |            | એકર ગૂંઠા | હે.- આરે |   |
| ૧      | ૨          | ૩          | ૪         | ૫        | ૬   |
| ૧      | ચીચોડ      | ૧૪૩/૪      | ૧૦.૩૨     | ૪.૩૭.૦૬  | ઉત્તર : સ.નં. ૧૪૩/૨ અને ૧૪૩/૩<br>પૂર્વ : સ. નં. ૧૪૪<br>દક્ષિણ : સ. નં. ૧૪૩/૬ અને ૧૪૩/૫<br>પશ્ચિમ: મોજે પાટણવાવનો સીમાડો |
| ૨      | ચીચોડ      | ૧૪૩/૬      | ૨.૨૨      | ૧.૦૩.૦૨  | ઉત્તર : સ.નં. ૧૪૩/૪<br>પૂર્વ : સ. નં. ૧૪૪<br>દક્ષિણ : સ. નં. ૧૪૩/૫<br>પશ્ચિમ: સ. નં. ૧૪૩/૪ અને ૧૪૩/૫                    |
|        |            | કુલ        | ૧૩.૧૪     | ૫.૪૦.૦૮  |   |

ગુજરાતના રાજ્યપાલના હુકમથી અને તેમના નામે,

મનીષ સી. શાહ,

સરકારના ઉપ સચિવ.

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સરકારી મધ્યસ્થ મુદ્રણાલય, ગાંધીનગર.



સત્યમેવ જયતે

# The Gujarat Government Gazette

## EXTRAORDINARY

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#### PART IV-A

Rules and Orders (Other than those published in Parts I, I-A, and I-L) made  
by the Government of Gujarat under the Central Acts

#### FOREST AND ENVIRONMENT DEPARTMENT

#### Notification

Sachivalaya, Gandhinagar, 30<sup>th</sup> June, 2018.

#### Indian Forest Act, 1927 (XVI OF 1927)

**GVN/2018-(06)/JJM/15-01/2018/GSF-05/F.-** In Exercise of the Powers conferred by the Section-20 of the Indian Forest Act, 1927(XVI OF 1927) in its Application to the State of Gujarat. The Government of Gujarat is pleased with reference of the Government Forest and Environment Department Notification No:-GVN-2006/(17)/JJM/1692/909/K, dated : 24/11/2006 Published in Gujarat Government Gazette to declare the land in Abdasa Taluka of Kutch District specified in the schedule here under appended, to be "RESERVED FOREST" with effect from the date of issue of this Notification.

#### SCHEDULE

Taluka : Abdasa

District : Kutch

| Sr. No. | Name of Village | Survey No.             | AREA                     |                         | Boundaries   |
|---------|-----------------|------------------------|--------------------------|-------------------------|--|
|         |                 |                        | A.G.                     | H.A.                    |  |
| 1       | 2               | 3                      | 4                        | 5                       | 6  |
| 1       | Naliya Part-1   | 1443,<br>1444,<br>1511 | 61.12<br>49.09<br>78.20  | 24.81<br>19.92<br>31.77 | North : S. No.1512, 650, 649<br>647, 641, 639, Marag<br>East : Marag, S.No. 543, 542, Marag<br>South : S. No. 1510<br>West : Boundary of Village Jasapar                                     |
| 2       | Part-2          | 1445,<br>1447,<br>1450 | 103.10<br>46.19<br>25.00 | 41.78<br>18.81<br>10.11 | North : S. No.545/3, 545/2, 545/1, 546,<br>1442, 1449<br>East : Marag, S.No. 390, 391/1, 392/1,<br>393, 1446, 489<br>South : S. No. 492, 493, 494/2, 494/1<br>West : Marag, S. No. 544 Marag |
|         |                 | <b>TOTAL</b>           | <b>363.30</b>            | <b>147.20</b>           |  |

By order and in the name of the Governor of Gujarat,

**MANISH C. SHAH,**

Under Secretary to Government.

## વન અને પર્યાવરણ વિભાગ

## જાહેરનામું

સચિવાલય, ગાંધીનગર, ૩૦મી જૂન, ૨૦૧૮.

**ક્રમાંક :** ગવન/૨૦૧૮-(૦૬)-જજમ/૧૫-૦૧/૨૦૧૮/જીએસએફ-૦૫/એફ.- ગુજરાત રાજ્યને લાગુ હોય તેટલે સુધી સને ૧૯૨૭ના ભારતના જંગલો બાબતોના (સને ૧૯૨૭ના ૧૬માં) અધિનિયમની કલમ-૨૦ થી મળેલા અધિકારો અન્વયે ગુજરાત સરકાર ગુજરાત રાજ્યપત્ર પર પ્રસિધ્ધ કરેલી તા. ૨૪-૧૧-૨૦૦૬ ના વન અને પર્યાવરણ વિભાગની અધિસૂચના ક્રમાંક : ગવન-૨૦૦૬/(૧૭)/જજમ/૧૬૮૨/૮૦૮-ક ના અનુસંધાનમાં આ સાથે જોડેલી અનુસૂચિમાં નિર્દિષ્ટ કરેલ કચ્છ જિલ્લાના અબડાસા તાલુકાની જમીનને આ અધિસૂચના પ્રસિધ્ધ થયાની તારીખથી “અનામત જંગલ” તરીકે જાહેર કરે છે.

## અનુસૂચિ

તાલુકો : અબડાસા

જિલ્લો : કચ્છ

| અ. નં. | ગામનું નામ     | સર્વે નંબર           | ક્ષેત્રફળ                |                         | ચતુ:સીમા  |
|--------|----------------|----------------------|--------------------------|-------------------------|---|
|        |                |                      | એકર ગૂંઠા                | હે.આર                   |   |
| ૧      | ૨              | ૩                    | ૪                        | ૫                       | ૬   |
| ૧      | નલિયા<br>ભાગ-૧ | ૧૪૪૩<br>૧૪૪૪<br>૧૫૧૧ | ૬૧.૧૨<br>૪૮.૦૮<br>૭૮.૨૦  | ૨૪.૮૧<br>૧૮.૮૨<br>૩૧.૭૭ | ઉત્તર : સ.નં. ૧૫૧૨, ૬૫૦, ૬૪૮, ૬૪૭<br>૬૪૧, ૬૩૮ મારગ<br>પૂર્વ : મારગ સ. નં. ૫૪૩, ૫૪૨, મારગ<br>દક્ષિણ : સ. નં. ૧૫૧૦<br>પશ્ચિમ: મોજે જસાપરનો સીમાડો   |
| ૨      | ભાગ-૨          | ૧૪૪૫<br>૧૪૪૭<br>૧૪૫૦ | ૧૦૩.૧૦<br>૪૬.૧૮<br>૨૫.૦૦ | ૪૧.૭૮<br>૧૮.૮૧<br>૧૦.૧૧ | ઉત્તર : સ.નં. ૫૪૫/૩, ૫૪૫/૨, ૫૪૫/૧,<br>૫૪૬, ૧૪૪૨, ૧૪૪૮<br>પૂર્વ : મારગ સ. નં. ૩૮૦, ૩૮૧/૧, ૩૮૨/૧,<br>૩૮૩, ૧૪૪૬, ૪૮૮<br>દક્ષિણ : સ. નં. ૪૮૨, ૪૮૩, ૪૮૪/૨, ૪૮૪/૧.<br>પશ્ચિમ: મારગ સ. નં. ૫૪૪, મારગ |
|        |                | કુલ                  | ૩૬૩.૩૦                   | ૧૪૭.૨૦                  |   |

ગુજરાતના રાજ્યપાલના હુકમથી અને તેમના નામે,

મનીષ સી. શાહ,  
સરકારના ઉપ સચિવ.



સત્યમેવ જયતે

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## PART IV-A

**Rule and Orders (Other than those published in Parts I, I-A, and I-L) made  
by the Government of Gujarat under the Central Acts**

### FOREST AND ENVIRONMENT DEPARTMENT

#### Notification

Sachivalaya, Gandhinagar, 30<sup>th</sup> June, 2018.

#### Indian Forest Act, 1927 (XVI OF 1927)

**GVN/2018-(07)/JJM/15-02/2018/GSF-06/F.--** In Exercise of the Powers conferred by the Section-20 of the Indian Forest Act, 1927(XVI OF 1927) in its Application to the State of Gujarat. The Government of Gujarat is pleased with reference of the Government Forest and Environment Department Notification No:-GVN-2004/(22)/JJM-1004-2022-K dated: 15.12.2004 Published in Gujarat Government Gazette Part-1 on page no. 140-3 to 140-4 to declare the land in Abdasa taluka of Kutch District specified in the schedule here under appended, to be "RESERVED FOREST" with effect from the date of issue of this Notification.

#### SCHEDULE

Taluka : Abdasa

District : Kutch

| Sr.<br>No. | Name of<br>Village | Survey<br>No.   | AREA          |              | Boundaries  |
|------------|--------------------|---|---------------|--------------|---|
|            |                    |   | A.G.          | H.A.         |   |
| 1          | 2                  | 3   | 4             | 5            | 6   |
| 1          | Jakhau             | 672,<br>773/1-2,<br>774/1-2,<br>775 to<br>784,<br>786 to<br>788 | 202.25        | 82.00        | North : S.No. 683/1,682/1, 682/2,681,674,673,<br>671<br>East : S.No. 1282, Boundary<br>of village Lala, S.No.785, Boundary of<br>village Lala.,<br>South : Boundary of village Lala.<br>West : Marag, S.No. 770/2, 772, 771,770/1,<br>668, 667, 763/2, 763/1,762. |
|            |                    | <b>TOTAL</b>  | <b>202.25</b> | <b>82.00</b> |   |

By order and in the name of the Governor of Gujarat,

**MANISH C. SHAH,**  
Under Secretary to Government.

## વન અને પર્યાવરણ ક્ષેત્ર

## જાહેરનામું

સચિવાલય, ગાંધીનગર, ૩૦+૭જૂન, ૨૦૧૮.

ક+શ્ર % ગવન/૨૦૧૮-(૦૭)-××+-૧૫-૦૨/૨૦૧૮/૬ અશ્રઅશ્ર૦૬/અશ્ર: ગુજરાત રાજ્યને લાગુ હોય તેટલે સુધી, સને ૧૯૨૭ના ભારતના જંગલો બાબતના (સને ૧૯૨૭ના ૧૬માં) અધિનિયમની કલમ-૨૦ થી મળેલ અધિકારો અન્વયે ગુજરાત સરકાર ગુજરાત રાજ્ય પત્ર પ્રસિધ્ધ કરેલી તા. ૨૮-૧૨-૨૦૦૪ ના વન અને પર્યાવરણ વિભાગની અધિસૂચના ક્રમાંક : ગવન-૨૦૦૪/(૨૨)/××+/૧૦૦૪/૨૦૨૨-ક ના અનુસંધાનમાં આ સાથે જોડેલી અનુસૂચિ+શ્રનિર્દિષ્ટ કરેલ ટુ જિલ્લાના અશ્ર શ્રતાલુકાની જમીનને આ અધિસૂચના પ્રસિધ્ધ થયાની તારીખથી 'અનામત જંગલ' તરીકે જાહેર કરે છે.

## અનુસૂચિ

તાલુકો : અશ્ર શ્ર

કુલ%ટુ

| અ. નં. | ગામનું નામ | સર્વે નંબર  | કુલ%ટુ      |       | ચતુશ્ચલ  |
|--------|------------|---|-------------|-------|--|
|        |            |   | અશ્ર ઠી શ્ર | હકક   |  |
| ૧      | ૨          | ૩   | ૪           | ૫     | ૬  |
| ૧      | ×શલ        | ૬૭૨,<br>૭૭૩/૧-૨,<br>૭૭૪/૧-૨,<br>૭૭૫ થી<br>૭૮૪,<br>૭૮૬ થી<br>૭૮૮ | ૨૦૨.૨૫      | ૮૨.૦૦ | ઉત્ક્ર % સ.નં. ૬૮૩/૧, ૬૮૨/૧, ૬૮૨/૨, ૬૮૧,<br>૬૭૪, ૬૭૩, ૬૭૧<br>પૂર્વ % સ. નં. ૧૨૮૨, મોજે લાલા ગામનો<br>સીમાડો, સ.નં. ૭૮૫, મોજે લાલા ગામનો<br>શ્રલશ્રલ<br>જશ્રશ્ર મોજે લાલા ગામનો સીમાડો<br>પશ્ચિમ% મારગ, સ.નં. ૭૭૦/૨, ૭૭૨, ૭૭૧,<br>૭૭૦/૧, ૬૬૮, ૬૬૭, ૭૬૩/૨,<br>૭૬૩/૧, ૭૬૨ |
|        |            | કુલ   | ૨૦૨.૨૫      | ૮૨.૦૦ |  |

ગુજરાતના રાજ્યપાલશ્રલા હુકમથી અને તેમના નામે,

મનીષ સી. શાહ,

સરકારના ઉપ શ્રલ.



સત્યમેવ જયતે

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### PART IV-A

Rules and Orders (Other than those published in Parts I, I-A, and I-L) made  
by the Government of Gujarat under the Central Acts

શ્રમ અને રોજગાર વિભાગ

જાહેરનામું

સચિવાલય, ગાંધીનગર, તા. ૬ જુલાઈ, ૨૦૧૮

ક્રમાંક: કેએચઆર/૨૦૧૮/૧૭૭/આઈબીએ/૧૧૨૦૧૪/૩૬૬૬૮૧/મ(૩)- બોયલર ઓપરેશન એન્જનીયર રૂલ્સ, ૨૦૧૧ અને બોયલર એટેન્ડન્ટ રૂલ્સ, ૨૦૧૧ના નિયમ-૯ હેઠળથી મળેલ સત્તાની રૂએ ગુજરાત સરકારનું શ્રમ અને રોજગાર વિભાગનું તા. ૧૦-૦૭-૨૦૧૪નું સરકારી જાહેરનામું ક્રમાંક:કેએચઆર/૨૦૧૪/૧૩૨/આઈબીએ/૧૧૨૦૧૪/૩૬૬૬૮૧/મ(૩) રદ કરીને પ્રાથમ મુવરોનું અને અદ્યતન બોઈલર પદ્ધતિનું સૈદ્ધાંતિક અને પ્રત્યક્ષ જ્ઞાન ધરાવતી નીચેની વ્યક્તિઓને રાજ્યપત્રમાં જાહેરનામું પ્રસિદ્ધ થયાની તારીખથી ત્રણ વર્ષની મુદત માટે ગુજરાત રાજ્ય માટેના પરીક્ષક બોર્ડના સભ્યો તરીકે નિમણુંક આપવામાં આવે છે.

| અ.નં. | નામ અને સંસ્થાનો હોદ્દો                                   | સરનામું  | હોદ્દો                  |
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| ૧     | નિયામક બોઈલરો,  | નિયામકશ્રી બોઈલરોની કચેરી,<br>ડી-બ્લોક, ત્રીજો માળ, બહુમાળી મકાન,<br>મંજુશ્રી મીલ કમ્પાઉન્ડ, ગીરધરનગર,<br>અસારવા, અમદાવાદ. | હોદ્દાની રૂએ<br>અધ્યક્ષ |
| ૨     | નાયબ/મદદનીશ નિયામક બોઈલરો,                                | નિયામકશ્રી બોઈલરો દ્વારા નિયુક્ત   | હોદ્દાની રૂએ<br>સચિવ    |
| ૩     | શ્રી એ.જી.પટેલ<br>સીની.મેનેજર                             | ઇન્ડિયન ફાર્મર્સ ફર્ટીલાઇઝર કો.ઓ.લી.,<br>કલોલ યુનિટ, પો.કસ્તુરીનગર, જી.ગાંધીનગર  | સભ્ય                    |
| ૪     | શ્રી નવલકિશોર ગુપ્તા                                      | કૃષક ભારતી કો.ઓ.લી., સુરત  | સભ્ય                    |
| ૫     | શ્રી ગૌરવ હર્ષદકુમાર વ્યાસ                                | ડીસીડબલ્યુ લીમીટેડ,<br>રેલ્વે સ્ટેશન પાસે, ઘાંગઘા, જી. સુરેન્દ્રનગર  | સભ્ય                    |
| ૬     | શ્રી મેહુલ વિપીનચંદ્ર દોશી<br>સીનીયર મેનેજર (એન્જનીયરીંગ) | મફતલાલ ઇન્ડસ્ટ્રીઝ લીમીટેડ,<br>વેજલપોર રોડ, નવસારી-૩૮૬૪૪૫  | સભ્ય                    |
| ૭     | શ્રી આર.ડી.જોષી<br>નિવૃત્ત મદદનીશ નિયામક, બોઈલરો          | ૯, રાજપથ સોસાયટી, મીઠીર પાર્કની બાજુમાં, ઓલ્ડ<br>પાદરા રોડ, વડોદરા   | સભ્ય                    |

| અ.નં. | નામ અને સંસ્થાનો હોદ્દો  | સરનામું   | હોદ્દો |
|-------|--|---|--------|
| ૮     | શ્રી એચ.બી.ગજજર,<br>નિવૃત્ત નિયામક, બોઇલરો   | ૧૪, સર્વોત્તમનગર સોસાયટી, મેમનગર ફાયર સ્ટેશન સામે, નવરંગપુરા, અમદાવાદ-૩૮૦૦૧૪                                      | સભ્ય   |
| ૯     | શ્રી એચ.કે.પંચાલ,<br>નિવૃત્ત નિયામક, બોઇલરો  | ૩/એ, અચલાપતન સોસાયટી, વિભાગ-૧, દેવેન્દ્રપાર્ક સોસાયટીની સામે, પલીયડનગર ચાર રસ્તા પાસે, નારણપુરા, અમદાવાદ-૩૮૦૦૧૩   | સભ્ય   |
| ૧૦    | શ્રી રાજેશ એમ. તળાવીયા<br>(મેનેજર ટીપીપી)  | સૌરાષ્ટ્ર સીમેન્ટ લીમીટેડ,<br>સી-૪, સૌરાષ્ટ્ર સીમેન્ટ કોલોની, રેલ્વે સ્ટેશન પાસે, રાણાવાવ, જી.પોરબંદર-૩૬૦૫૬૦      | સભ્ય   |
| ૧૧    | શ્રી એલ. એમ. માવાણી<br>આસી.જનરલ મેનેજર (પાવરપ્લાન્ટ)   | નિરમા લીમીટેડ,<br>કાળા તળાવ, ભાવનગર   | સભ્ય   |
| ૧૨    | શ્રી જે.બી.સુહાગ<br>(વાઇસ પ્રેસીડેન્ટ)   | મે. રીબો ઈન્ડસ્ટ્રીઝ પ્રા.લી.<br>૩૦૩-બી, બીજનેશ સ્પેસ સેન્ટર, ફોરચ્યુન લેન્ડ સામે, ઉસ્માનપુરા, આશ્રમ રોડ, અમદાવાદ | સભ્ય   |
| ૧૩    | શ્રી પ્રતાપસિંહ એમ. પઢીયાર<br>આસીસ્ટન્ટ વાઇસ પ્રેસીડેન્ટ (પાવર પ્લાન્ટ)  | ગાર્ડન સિલ્ક મીલ્સ લી.,<br>જોલવા, તા. પલસાણા, જી.સુરત-૩૮૫૦૧૦  | સભ્ય   |
| ૧૪    | શ્રી કાંતિભાઈ દલુભાઈ ચૌધરી<br>સીની.એકઝી. એન્જીનીયર (બોઇલર)   | મહેસાણા જી.સહ.દુધ.ઉ. સંઘ લી.<br>દુધસાગર ડેરી, પો.બો.નં. ૧, મહેસાણા.   | સભ્ય   |
| ૧૫    | શ્રી કે.એન.મિસ્ત્રી<br>(સીનીયર મેનેજર)   | એન.આર. અગ્રવાલ ઈન્ડસ્ટ્રીઝ લી. (યુનિટ-૨)<br>ફેઝ-૧, પ્લોટ નં. ૧, જીઆઈડીસી, વાપી, જી.વલસાડ                          | સભ્ય   |
| ૧૬    | શ્રી જે.આઈ.પટેલ<br>નિવૃત્ત નાયબ નિયામક, બોઇલરો   | બી-૪, શ્રુતિ એપાર્ટમેન્ટ, માનવ મંદિર પાછળ,<br>મેમનગર, અમદાવાદ   | સભ્ય   |
| ૧૭    | શ્રી પીનાકીન બી. પટેલ<br>ડેપ્યુટી જનરલ મેનેજર (સીપીપી)   | બિરલા કોપર, (યુનિટ ઓફ હીન્ડલ્કો ઈન્ડલી.)<br>દહેજ, જી.ભરૂચ   | સભ્ય   |
| ૧૮    | શ્રી એ.ડી.વ્યાસ<br>એકઝીક્યુટીવ વાઇસ પ્રેસીડેન્ટ (પાવર પ્લાન્ટ)   | મેઇઝ પ્રોડક્ટસ,<br>પો. કઠવાડા, અમદાવાદ-૩૮૨૪૩૦   | સભ્ય   |
| ૧૯    | શ્રી રાજેન્દ્ર ચીમનલાલ શાહ<br>ડેપ્યુટી મેનેજર  | નિરમા લીમીટેડ,<br>અમદાવાદ મહેસાણા હાઇવે, પો.મંડાલી, જી.મહેસાણા  | સભ્ય   |
| ૨૦    | શ્રી કેશભાઈ જેસંગદાસ પટેલ<br>થર્મલ પાવર પ્લાન્ટ એડવાઇઝર અને<br>કન્સલ્ટન્ટ ઇલેક્ટ્રોથર્મ પ્લોડીયા અમદાવાદ<br>અને ઇલેક્ટ્રોથર્મ, સામખીયાણી. જી. કર્ણ | ૨૩, આરોહી હોમ્સ, બોપલ જજ ની પાછળ, બોપલ,<br>અમદાવાદ-૩૮૦૦૫૮   | સભ્ય   |
| ૨૧    | શ્રી મહેશભાઈ ભાણાભાઈ પટેલ સીનીયર<br>મેનેજર, પાવર પ્લાન્ટ   | નોસીલ લીમીટેડ,<br>પ્લોટ નં. ૧૨/એ/૧ અને ૧૩/બી/૧,<br>જીઆઈડીસી ઈન્ડસ્ટ્રીયલ એરીયા, દહેજ, તા.વાગરા,<br>જી.ભરૂચ        | સભ્ય   |
| ૨૨    | શ્રી સ્નેહલ પંડ્યા<br>(હેડ ઓપરેશન એન્ડ મેન્ટેનન્સ)   | વાડીનાર પાવર કંપની લી.<br>એસ્સાર પાવર. પી.ઓ.બોક્ષ. ૨૪, પો.ઓ-ખંભાળીયા,<br>જી.જામનગર-૩૬૧૩૦૫                         | સભ્ય   |
| ૨૩    | શ્રી હર્ષદકુમાર ગુણવંતલાલ પટેલ<br>(ડેપ્યુટી જનરલ મેનેજર)   | સીઆઈએલ નોવા પેટ્રોકેમીકલ્સ લી.<br>૩૯૬, (પી, ૩૯૫/૪(પી.)) મોરૈયા<br>સરખેજ બાવળા હાઇવે, તા.સાણંદ, જી.અમદાવાદ         | સભ્ય   |



| અ.નં. | નામ અને સંસ્થાનો હોદ્દો   | સરનામું  | હોદ્દો |
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| ૨૪    | શ્રી રાજેશ બી. પુરોહીત<br>(કેપ્યુટી જનરલ મેનેજર)                                  | મે. લુપીન લીમીટેડ,<br>બ્લોક નં. ૨૧, ડભાસા,<br>તા. પાદરા, જી.વડોદરા   | સભ્ય   |
| ૨૫    | શ્રી જીગ્નેશ દિનેશભાઈ ત્રિવેદી<br>આસી. જનરલ મેનેજર<br>(યુટીલીટી અને પાવર પ્લાન્ટ) | ગુજરાત અંબુજા એક્સપોર્ટ્સ લી.<br>૧, વૃંદાવન રોડ, પો. દલપુર,<br>તા. પ્રાંતિજ, જી. સાબરકાંઠા-૩૮૩૧૨૦                      | સભ્ય   |
| ૨૬    | શ્રી એ.પી.મોઢા<br>જનરલ મેનેજર (ઓપરેશન)  | ટોરેન્ટ પાવર લીમીટેડ,<br>પ્લોટ નં. ૩૬-૯, દહેજ, સેઝ એરીયા,<br>તા.વાગરા, જી.ભરૂચ   | સભ્ય   |
| ૨૭    | શ્રી દીપક સી. પટેલ<br>સીનીયર મેનેજર (પાવર પ્લાન્ટ)                                | અતુલ લીમીટેડ,<br>પો. અતુલ, જી. વલસાડ,  | સભ્ય   |
| ૨૮    | શ્રી હિતેન્દ્ર પ્રવિણચંદ્ર પટેલ<br>મેનેજર, યુટીલીટી                               | મે. હબરગ્રુપ ઇન્ડિયા પ્રા.લી.<br>પ્લોટ નં. ૮૦૮/ઈ, ૩૦૫/૬/૭, ફેસ-૨,<br>જીઆઈડીસી, વાપી-૩૮૬૧૮૫, જી.વલસાડ                   | સભ્ય   |
| ૨૯    | જશુ બી. કાવડ<br>આસી. જનરલ મેનેજર  | શ્રીરામ આલ્કાલીઝ એન્ડ કેમીકલ્સ,<br>૭૪૯, જીઆઈડીસી, ઝઘડીયા, જી.ભરૂચ-૩૮૩૧૧૦   | સભ્ય   |
| ૩૦    | શ્રી સંતોષ શ્યામસુંદર દેસાઈ<br>(જનરલ મેનેજર)                                      | અલ્ટ્રાટેક સીમેન્ટ લીમીટેડ,<br>૯૨ MW, થર્મલ પાવર પ્લાન્ટ, કોવાયા, તા. રાજુલા,<br>જી. અમરેલી                            | સભ્ય   |
| ૩૧    | ગુપ્તા ચંદ્રપ્રકાશ મહેન્દ્રપાલ<br>એડીશનલ જનરલ મેનેજર                              | ગુજરાત નર્મદાવેલી ફર્ટીલાઇઝર એન્ડ કેમીકલ લી.,<br>નર્મદાનગર, ભરૂચ   | સભ્ય   |
| ૩૨    | શ્રી વિપુલકુમાર ઘનસુખલાલ દવે<br>(કેપ્યુટી મેનેજર, પાવર પ્લાન્ટ)                   | શ્રી રેવુકા સુગર્સ લી.,<br>સ.નં. ૧૭૮, ભારાપર ગામ,<br>તા.ગાંધીધામ, જી. કચ્છ   | સભ્ય   |
| ૩૩    | શ્રી પી.કે.સપકલ<br>(ચીફ યુ એન્ડ ઇસી)  | ગુજરાત સ્ટેટ ફર્ટીલાઇઝર્સ એન્ડ કેમીકલ્સ લી.,<br>પો. ફર્ટીલાઇઝરનગર, જી. વડોદરા  | સભ્ય   |
| ૩૪    | શ્રી અમરીશસિંહ જી. રાણા   | ગોદરેજ ઇન્ડસ્ટ્રીઝ લીમીટેડ, બુરજોરજીનગર,<br>પ્લોટ નં.૩, ગામ-કનેરાવ, તા.વાલીયા, જી. ભરૂચ                                | સભ્ય   |
| ૩૫    | શ્રી અતુલ વી. થાનકી.<br>(જનરલ મેનેજર, પાવર પ્લાન્ટ)                               | મે.વિશાલ ફેબ્રીકસ લીમીટેડ,<br>સ.નં. ૨૮૯-૨૯૭, ઢોલ ઇન્ટરગ્રેટેડ સ્પીનિંગ પાર્ક,<br>ગામ-ઢોલી, તા.ધોળકા, જી.અમદાવાદ        | સભ્ય   |
| ૩૬    | શ્રી અનુપકુમાર સીંઘ<br>(ડાયરેક્ટર)  | ડોનીયર ઇન્ડસ્ટ્રીઝ લી.,<br>રેવન્યુ બ્લોક નં. ૧૯૪, ૧૯૫ અને ૧૯૬,<br>કડોદરા બારડોલી રોડ, ગામ-જોલવા,<br>તા.પલસાણા, જી.સુરત | સભ્ય   |
| ૩૭    | શ્રી મોહનલાલ લીલાધર ઘોઠાઈ<br>(એક્ઝીક્યુટીવ આસી., ટેકનીકલ)                         | ટાટા કેમીકલ્સ લી.<br>મીઠાપુર, જી.દેવભૂમી ઝારકા-૩૬૧૩૪૫  | સભ્ય   |
| ૩૮    | પ્રો.(ડો) જે.એમ.પટેલ<br>પ્રાધ્યાપક (મિકેનિકલ)                                     | સરકારી ઇજનેરી કોલેજ,<br>બી.પી.ટી આઈ પોલીટેકનીકની પાસે,<br>વિધાનગર એરીયા, ભાવનગર-૩૬૪૦૦૨                                 | સભ્ય   |
| ૩૯    | પટેલ શાંતિલાલ લાલજીભાઈ  | મંગલ ટેક્સટાઇલ મીલ્સ (ઇન્ડિયા) પ્રા.લી.,<br>વટવા, ફેઝ-૧, અમદાવાદ.  | સભ્ય   |

| અ.નં. | નામ અને સંસ્થાનો હોદ્દો   | સરનામું  | હોદ્દો |
|-------|---|--|--------|
| ૪૦    | શ્રી વિવેક શર્મા<br>(આસી. જનરલ મેનેજર પાવર પ્લાન્ટ)                         | મે. મેઘમણી ફાઇનકેમ લીમીટેડ,<br>સીએચ-૧/૨, જીઆઈડીસી ઇન્ડ. એસ્ટેટ, દહેજ,<br>તા.વાગરા, જી.ભરૂચ             | સભ્ય   |
| ૪૧    | શ્રી વિજય એ. ભાયાણી<br>(એચઓડી)  | સત્યેન વ્રાઈન કેમ પ્રા.લી.,<br>હાજીપીર સાઈટ, જી.કચ્છ   | સભ્ય   |
| ૪૨    | શ્રી સંજય એમ. પ્રજાપતિ  | વેલ્સપન કેપ્ટીવ પાવર જનરેશન લીમીટેડ,<br>સ.નં.૬૭૨, ગામ-વષમિડી, તા.અંજાર, જી.કચ્છ                        | સભ્ય   |
| ૪૩    | શ્રી અવિનાશ કુમાર   | ગ્રાસીમ ઇન્ડસ્ટ્રીઝ લી.,<br>પ્લોટ નં.૧, જીઆઈડીસી, વિલાયત ઇન્ડ. એસ્ટેટ,<br>પો.વિલાયત, તા.વાગરા, જી.ભરૂચ | સભ્ય   |
| ૪૪    | શ્રી વિનોદકુમાર વાઘેલા<br>(ડેપ્યુટી જનરલ મેનેજર પાવર પ્લાન્ટ)               | ઇલેક્ટ્રોથર્મ ઇન્ડીયા લી.<br>ટોલનાકા પાસે, સામખીયાણી,<br>તા.ભચાઉ, જી.કચ્છ                              | સભ્ય   |
| ૪૫    | શ્રી યોગેશ ગોહીલ<br>(હેડ-યુટીલીટી)  | અરવિંદ લીમીટેડ,<br>પો. ખાત્રજ, તા. કલોલ, જી.ગાંધીનગર-૩૮૨૭૨૧  | સભ્ય   |
| ૪૬    | શ્રી રાજકુમાર એમ. પટેલ<br>(વાઈસ પ્રેસીડેન્ટ)                                | વરસાણા ઇસ્પાત લી.<br>પો.બો. નં. ૧૩૩, ગામ- વરસાણા,<br>તા.અંજાર, જી. કચ્છ                                | સભ્ય   |
| ૪૭    | પ્રા. એસ. એમ. મહેતા<br>પ્રાધ્યાપક-યાંત્રિક ઇજનેરી, વર્ગ-૧                   | એલ.ડી.કોલેજ ઓફ એન્જીનીયરીંગ,<br>નવરંગપુરા, અમદાવાદ   | સભ્ય   |
| ૪૮    | પ્રા. વાય.ડી.વોરા<br>પ્રાધ્યાપક-યાંત્રિક ઇજનેરી, વર્ગ-૧                     | એલ.ડી.કોલેજ ઓફ એન્જીનીયરીંગ,<br>નવરંગપુરા, અમદાવાદ   | સભ્ય   |
| ૪૯    | પ્રો. આર.જે.જાની<br>સહ પ્રાધ્યાપક, યાંત્રિક ઇજનેરી.                         | એલ.ડી. કોલેજ ઓફ એન્જીનીયરીંગ<br>નવરંગપુરા, અમદાવાદ-૧૫  | સભ્ય   |
| ૫૦    | શ્રી સુરેન્દ્રપુરી ગોસ્વામી<br>(આસી. જનરલ મેનેજર)                           | અલ્ટ્રાટેક સીમેન્ટ લી.,<br>સેવાગ્રામ સીમેન્ટ લી., મું વાચોર,<br>તા.અબડાસા, જી. કચ્છ                    | સભ્ય   |
| ૫૧    | શ્રી રાજીવ શાહ  | રીલાયન્સ ઇન્ડસ્ટ્રીઝ લી., જામનગર   | સભ્ય   |
| ૫૨    | શ્રી નિલેશ રજનીકાંત સોજીત્રા<br>જનરલ મેનેજર<br>(સીપીપી ઓપરેશન પાવર પ્લાન્ટ) | રીલાયન્સ ઇન્ડસ્ટ્રીઝ લી.,<br>દહેજ મેન્યુફેક્ચરીંગ ડીવીઝન, પો. દહેજ,<br>તા. વાગરા, જી. ભરૂચ             | સભ્ય   |
| ૫૩    | શ્રી અમીત કે. પટેલ<br>(ટેકનીકલ કન્સલ્ટન્ટ)                                  | મેકઝેડ નેટવર્ક પ્રા.લી. એસએફ-૪૫-૪૭,<br>રૂદ્રાક્ષ કોમ્પલેક્સ-II, અન્નપુર્ણા હોટલ સામે,<br>વટવા, અમદાવાદ | સભ્ય   |

ગુજરાતના રાજ્યપાલશ્રીના હુકમથી અને તેમના નામે,

આર. એચ. વસાવા,  
સરકારના નાયબ સચિવ.

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સરકારી મધ્યસ્થ મુદ્રણાલય, ગાંધીનગર.



सत्यमेव जयते

# The Gujarat Government Gazette

## EXTRAORDINARY

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### PART IV-A

**Rules and Orders (Other than those published in Parts I, I-A, and I-L) made  
by the Government of Gujarat under the Central Acts**

#### LABOUR AND EMPLOYMENT DEPARTMENT

#### Notification

Sachivalaya, Gandhinagar, 11<sup>th</sup> July, 2017

#### Constitution of India.

No.KHR-2018-181-TLM-102008-151661-R(1):- In exercise of the powers conferred by the provision to article 309 of the Constitution of India, the Governor of Gujarat hereby makes the following rules further to amend the Principal, Class II/ Senior Surveyor, Class II/ Technical Officer, Class II/ Training-cum-Placement Officer/ Trade Testing Officer/ Senior Training Officer Recruitment Rules, 2009, namely:-

1. These rules may be called the Principal Class II/ Senior Surveyor Class II/Technical Officer, Class II/ Training-cum-Placement Officer/Trade Testing Officer/Senior Training Officer Recruitment (Amendment) Rules, 2018.
2. In the Principal, Class II/ Senior Surveyor, Class II/ Technical Officer, Class II/ Training-cum-Placement Officer/ Trade Testing Officer/ Senior Training Officer Recruitment Rules, 2009, in rule 4,
  - (i) in clause (A), for the figures and word “37 years”, the figures and word “38 years” shall be substituted.
  - (ii) for clause (B), the following shall be substituted, namely :-

#### (B) possess, -

- (a) (i) A degree in Engineering or Technology obtained from any of the Universities established or incorporated by or under the Central or State Act in India or any other Educational Institution recognised as such or declared to be deemed as a University under section 3 of the University Grants Commission Act, 1956 or possess an equivalent qualification recognised by the Government and

- (ii) about three years experience on the post not below the rank of Supervisor Instructor Class-III, in Gujarat Skill Training Service in the subordinate services of the Directorate of Employment and Training, Gujarat State, or
- (iii) about Three years combined or separate experience in the field of training or maintenance or technical teaching or technical supervision in the Government/ Government Technical Teaching Institution or Private or Public sector Technical Teaching Institution/ Vocational Training Institution/Government Undertaking Board/Corporation/Local Bodies or Limited Company established under The Companies Act, 2013 or training workshop or factory/industry engaged in Maintenance or Production or Designing or Teaching field on the post which can be considered equivalent to the post not below the rank of Supervisor Instructor Class-III, in Gujarat Skill Training Service in the sub-ordinate services of Directorate of Employment and Training, Gujarat State or
- (b) (i) A diploma with at least second class in Engineering or Technology obtained from Technical Examination Board or any of the Universities established or incorporated by or under the Central or a State Act in India; or any other Educational Institution recognised as such or declared to be deemed as a University under section 3 of the University Grants Commission Act, 1956 and
- (ii) about five years experience on the post not below the rank of Supervisor Instructor Class-III, in Gujarat Skill Training Service in the subordinate services of the Directorate of Employment and Training, Gujarat State or
- (iii) about five years combined or separate experience in the field of training or maintenance or technical teaching or technical supervision in the Government/Government Technical Teaching Institution or Private/Public sector Technical Teaching Institution/ Vocational Training Institution/Government Undertaking Board/Corporation/Local Bodies or Limited Company established under Companies Act, 2013 or training workshop/factory/industry engaged in Maintenance or Production or Designing or Teaching field on the post which can be considered equivalent to the post not below the rank of Supervisor Instructor Class-III, in Gujarat Skill Training Service in the sub-ordinate services of Directorate of Employment and Training, Gujarat State;

**Explanation: -**

1. According to Industrial Disputes Act, 1947 and the Factory Act, 1948 “Industries” “Factory” and “Training Workshop” means all small, medium and heavy workshop/factory.
2. Technical Teaching Institution means an Institution referred to in sub clause (a)(i) or (b)(i) above
3. Vocational Training Institution means Regional Vocational Training Institute or Industrial Training Institute or Government Technical High School affiliated to National Council of Vocational Training or Gujarat Council of Vocational Training.

By order and in the name of the Governor of Gujarat,

**J. C. PATEL,**

Under Secretary to Government.



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ગૃહ વિભાગ

જાહેરનામું

સચિવાલય, ગાંધીનગર, ૦૭મી જુલાઈ, ૨૦૧૮.

ફોજદારી કાર્યરીતિ અધિનિયમ-૧૯૭૩.

ક્રમાંક : જીજી/૨૦૧૮/૫૦/વિ-૨/કમબ/૨૪૮૦/૨૭૫૧-ભાગ-૩ :- સબડીવીઝનલ મેજિસ્ટ્રેટશ્રી, સિદ્ધપુરે ફોજદારી કાર્યરીતિ અધિનિયમ-૧૯૭૩ ની કલમ-૧૪૪ હેઠળ કરેલા અને આ સાથેની અનુસૂચિમાં ફરી જણાવેલ તા.૨૫/૦૧/૨૦૧૮ના હુકમ ક્રમાંક:પીઓએલ/પ્રતિબંધ/વશી/૩૬૨મહાલય જાહેરનામું/૧૮ જેનો આમાં હવે પછી સદરહુ હુકમ તરીકે ઉલ્લેખ કર્યો છે. તેમાં નિર્દિષ્ટ કરેલા વિસ્તારમાં હુદ્દાડ અને બખેડો અટકાવવા માટે ગુજરાત સરકારે તેમ કરવું જરૂરી જણાય છે.

તેથી હવે સદરહુ અધિનિયમની કલમ-૧૪૪ ની પેટાકલમ (જ)ના પરંતુકથી મળેલ સત્તાની રૂએ ગુજરાત સરકાર આથી હુકમ કરે છે કે, સને-૨૦૧૮ના માર્ચ માસની ૨૭મી તારીખે સદરહુ હુકમ જેની મુદત આ જાહેરનામું હોત તો પૂરી થઈ ગઈ હોય તે સને-૨૦૧૮ ના માર્ચ માસની ૨૮મી તારીખે અને તે તારીખથી વધુ છ મહિનાની મુદત અર્થાત તા.૨૭/૦૬/૨૦૧૮ સુધી અમલમાં રહેશે.

ગુજરાતના રાજ્યપાલશ્રીના હુકમથી અને તેમના નામે,

પંકજ દવે,

સરકારના ઉપસચિવ.

## અનુસૂચિ

ફોજદારી કાર્યરીતી અધિનિયમ-૧૯૭૪-૭૮ ના એક્ટ-૨ ની કલમ-૧૪૪ અન્વયે કાઢેલ હુકમ

નં.પીઓએલ/પ્રતિબંધ/વશી/રૂઢમહાલય જાહેરનામું/૧૮.

સિદ્ધપુર ઐતિહાસિક સ્થળ રૂઢમહાલય આવેલ છે. તેની બાજુમાં એક મસ્જિદ આવેલ છે. જે જુમ્મા મસ્જિદ તરીકે ઓળખાય છે અને તે મિલ્કતો ભારત સરકારના પુરાતત્વ ખાતા રક્ષિત ઇમારત તરીકે જાહેર કરાયેલ છે અને તે ઇમારતો ઉપયોગ સારું હિન્દુ તથા મુસલમાનોની કોમો વચ્ચે સિદ્ધપુરમાં ઘણીવાર ભારે તંગ પરિસ્થિતિ પેદા થાય છે. અને તે હાલ પ્રવર્તે છે. આ બાબતે નામદાર ગુજરાત સરકારે અગાઉ પ્રતિબંધિત વિસ્તાર તરીકે જાહેરનામું બહાર પાડેલ છે. જે જાહેરનામાની મુદત પુરી થાય છે. તેથી બન્ને કોમો તરફથી રૂઢમહાલય અને જુમ્મા મસ્જિદમાં પુજા કરવા અને નમાઝ પઢવા જાય તેમ માનવાને કારણ છે. બંને કોમો વચ્ચે ફરીથી તંગદિલી ઉભી થવા સંભવ છે. જેથી જાહેર સુલેહ શાંતિનો ભંગ થતો અટકાવવાનું ઈષ્ટ જણાય છે અને તેમ થતું તાત્કાલીક અટકાવવા ઝડપી ઉપાય ચોજવાનું ઈચ્છનીય છે.

વાસ્તે હું જશવંત કે. જેગોડા, સબ ડીવીઝનલ મેજિસ્ટ્રેટ, સિદ્ધપુરને મળેલ ખાસ સત્તાની રૂએ આથી હું ફરમાવું છું કે, નીચે અનુસંધાનવાળા જણાવેલ મિલકતોમાં તારીખ: ૨૮-૦૫-૨૦૧૭ના રોજથી ૬૦ દિવસ સુધી, તા. ૨૬-૦૭-૨૦૧૭ સુધી સદર મિલકતોમાં અગર તેની અંદર આવેલ કોઈપણ સ્થળે કોઈપણ રીતે ઉપયોગ કરવો નહિ તેનો પ્રતિબંધ ફરમાવું છું.

મિલકતોના વિસ્તારની ચર્તુસીમા

- પૂર્વ દિશા :- ઘર નં.૧/૧૦/૮૪ ની પછીત નદીમાં જવાનો રસ્તો તથા ઘર નં.૧/૧૦/૮૫ નો કરો.
- પશ્ચિમ દિશા :- રૂઢમહાલય તથા મસ્જિદની હદથી રસ્તો દેસાઈના મહાડ તરફ જવાનો તથા ત્યાંથી વહોરવાડ તરફ જવાનો રસ્તો મુકી ઘર નં.૧/૧૦/૪૩, ૧/૧૦/૪૪ તથા ૧/૧૦/૪૫ ની પછીત તથા બારણું.
- ઉત્તર દિશા :- રૂઢમહાલય તથા મહોલ્લામાં ઘર નં.૧/૧૦/૭૨ થી ૧/૧૦/૭૬ ના મકાનની પછીત તથા પસવાદળની પોળ તરફ જવાનો રસ્તો જે દેસાઈના માઢ તરફ જાય છે. તેની બીજી બાજુએ ઘર નં.૧/૧૧/૮૫ થી ૧/૧૧/૧૦૦ના મકાનોના આગળનો ભાગ.
- દક્ષિણ દિશા :- જુની વહોરવાડ તથા દેસાઈના માઢ તરફ જવાનો રસ્તો ઓળંગી ઘર નં.૧/૫/૫ તથા ૧/૫/૬ નો આગળનો ભાગ તથા બારણા તથા ત્યારબાદ રસ્તો મુકીને ઘર નં.૧/૧૦/૪૬ના મકાનનો કરાનો ભાગ.

સદરહુ હુકમનો ભંગ કરનાર ભારતના ફોજદારી અધિનિયમની કલમ-૧૮૮ મુજબની શિક્ષાને પાત્ર થશે. આ ગુનો કોઝીઝેબલ બિન જામીન લાયક ગુનો છે. આ હુકમ જિલ્લા મેજિસ્ટ્રેટશ્રી, પાટણ, જિલ્લા પોલીસ વડાશ્રી પાટણ તથા એકઝીક્યુટીવ મેજિસ્ટ્રેટશ્રી, સિદ્ધપુર અથવા આ અર્થે તેમને અધિકૃત કરેલા અધિકારીઓ પાસેથી પરમીટ ધરાવનાર વ્યક્તિઓને લાગુ પડશે નહીં. અગર ફરજ ઉપર હાજર રહેનાર પુરાતત્વ ખાતાના તથા રાજ્ય સરકારના અધિકારીઓ તથા નોકરોને લાગુ પડશે નહીં.

આજ તા.૨૫/૦૧/૨૦૧૮ ના રોજ મારી સહી તથા સિક્કો કરી આપેલ છે.

સીલ

જશવંત કે. જેગોડા,  
સબ ડીવીઝનલ મેજિસ્ટ્રેટ,  
સિદ્ધપુર.

ગુજરાતના રાજ્યપાલશ્રીના હુકમથી અને તેમના નામે,

પંકજ દવે,  
સરકારના ઉપસચિવ.



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## **PART IV-A**

**Rules and Orders (Other than those published in Parts I, I-A, and I-L) made  
by the Government of Gujarat under the Central Acts**

### **FINANCE DEPARTMENT, NOTIFICATION**

Sachivalaya, Gandhinagar, 12<sup>th</sup> July, 2018.

#### **CONSTITUTION OF INDIA.**

**No.GN-60/VVK/12/2018/394392/Th3:-** In exercise of the powers conferred by the proviso to article 309 of the Constitution of India and in supersession of all the rules made in this behalf, the Governor of Gujarat hereby makes the following rules to provide for regulating recruitment to the post of State Tax Officer of State Tax, Class II in the General State service under the Commissionerate of Goods and Services Tax, Gujarat State, namely:-

1. These rules may be called the State Tax Officer of State Tax, Class II in the General State service under the Commissionerate of Goods and Services Tax, Recruitment Rules, 2018.
2. Appointment to the post of State Tax Officer of State Tax, Class II in the Gujarat Goods and Services Tax, Services under the Commissionerate of Goods and Services Tax, Gujarat State, shall be made either,-

[A] (a) by promotion of a person of proved merit and efficiency from amongst the persons, who,-

- (i) have worked for not less than seven years in the cadre of State Tax Inspector, Class III in the subordinate service under the Commissionerate of Goods and Services Tax, Gujarat State and;
- (ii) have passed the qualifying examination for computer knowledge in accordance with the provisions of the Gujarat Civil Services Computer Competency Training and Examination Rules 2006;
- (iii) have passed the prescribed departmental examination:

Provided that where the appointing authority is satisfied that a person having the experience specified in sub-clause (i) above is not available for promotion and that it is necessary in the public interest to fill up the post by promotion even of a person having experience for a lesser period; it may, for reasons to be recorded in writing, promote such person who possesses experience of a period of not less than two-thirds of the period specified in sub-clause (i) above; or

- (b) by promotion on the basis of the Special Competitive Examination held by the Gujarat Public Service Commission of a person of proved merit and efficiency from amongst the persons, who,—
- (i) have worked for not less than five years in the cadre of State Tax Inspector, Class III in the subordinate service under the Commissionerate of Goods and Services Tax, Gujarat State;
  - (ii) have passed the prescribed departmental examination;
  - (iii) possess a bachelor's degree obtained from any of the Universities established or incorporated by or under the Central or a State Act in India; or any other educational institution recognised as such or declared to be a deemed University under section 3 of the University Grants Commission Act, 1956 or possess an equivalent qualification recognised by the Government;
  - (iv) have passed the qualifying examination for computer knowledge in accordance with the provisions of the Gujarat Civil Services Computer Competency Training and Examination Rules, 2006; and
  - (v) have passed the Special Competitive examination in accordance with the rules prescribed by the Government; or
- (B) on the basis of the result of a competitive examination held for the purpose.
3. The appointment by promotion, on the basis of the special competitive examination and on the basis of the result of a competitive examination held for the purpose under the clauses (a) and (b) of sub-rule (A) of rule 2 and sub-rule (B) of rule 2 shall be made in the ratio of 3:1:1 respectively.
  4. To be eligible for appointment on the basis of the result of a competitive examination held for the purpose to the post mentioned in rule 2, a candidate shall,—
    - (a) not be more than 35 years of age;
    - (b) possess a bachelor's degree obtained from any of the Universities established or incorporated by or under the Central or a State Act in India; or any other educational institution recognised as such or declared to be deemed as a University under section 3 of the University Grants Commission Act, 1956 or possess an equivalent qualification recognised by the Government;
    - (c) possess the basic knowledge of computer application as prescribed in the Gujarat Civil Services Classification and Recruitment (General) Rules 1967; and
    - (d) possess adequate knowledge of Gujarati or Hindi or both.
  5. The candidate appointed on the basis of the result of a competitive examination held for the purpose shall be on probation for a period of two years.
  6. The candidate appointed on the basis of the result of a competitive examination held for the purpose, during his probation period shall be required to undergo pre-service training and to pass the post-training examination in accordance with the provisions of the Gazetted Officer's Pre-service Training and Examination Rules, 1970.
  7. The candidate appointed on the basis of the result of a competitive examination held for the purpose, during his probation period shall be required to pass the qualifying examination for computer knowledge in accordance with the provisions of the Gujarat Civil Services Computer Competency Training and Examination Rules, 2006.
  8. The candidate appointed on the basis of the result of a competitive examination held for the purpose shall be required to pass the departmental examination and an examination in Hindi or Gujarati or both in accordance with the rules prescribed by the Government.
  9. The candidate appointed either on the basis of the result of a competitive examination held for the purpose or by promotion shall require to undergo such training and pass such examination as may be prescribed by the Government.
  10. The candidate appointed on the basis of the result of a competitive examination held for the purpose shall be required to furnish a security and surety bond in such form, for such amount and for such period as may be prescribed by the Government.

By order and in the name of the Governor of Gujarat,

**K.H.PATHAK,**

Deputy Secretary to Government.

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## EXTRAORDINARY

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### PART IV-A

Rules and Orders (Other than those published in Parts I, I-A, and I-L) made  
by the Government of Gujarat under the Central Acts

#### FINANCE DEPARTMENT,

#### NOTIFICATION

Sachivalaya, Gandhinagar, 13<sup>th</sup> July, 2018.

#### Constitution of India.

No. (GN- 61) No. PSN- 102016-D-372-P :- In exercise of the powers conferred by the proviso to article 309 of the Constitution of India, the Governor of Gujarat hereby makes the following rules further to amend the Gujarat Civil Services (Pension) Rules, 2002, namely :-

1. These rules may be called the Gujarat Civil Services (Pension) (Amendment) Rules, 2018.
2. In the Gujarat Civil Services (Pension) Rules, 2002, in rule 188 for the words "pension for service in the Civil Department", the words "pension / family pension for service in the Civil Department" shall be substituted.

By order and in the name of the Governor of Gujarat,

**K. K. PATEL,**

Deputy Secretary to Government.

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# The Gujarat Government Gazette

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### PART IV-A

Rules and Orders (Other than those published in Parts I, I-A, and I-L) made  
by the Government of Gujarat under the Central Acts

#### HEALTH AND FAMILY WELFARE DEPARTMENT,

#### NOTIFICATION

Sachivalaya, Gandhinagar, 19<sup>th</sup> June, 2018.

#### Constitution of India.

**NO.: GP/23/DNT/102011/2252/V :-** In exercise of the powers conferred by the proviso to article 309 of the Constitution of India and in supersession of all the rules made in this behalf, the Governor of Gujarat hereby makes the following rules to provide for regulating recruitment to the post of Assistant Professor, Class-I in General State Service, in the Basic Medical and Medical subjects mentioned in the Annexure-I and Annexure-II, at the Government Dental Colleges and attached hospitals under the Commissionerate of Health, Medical Services and Medical Education and Research, Gujarat State, namely:-

1. These rules may be called the Assistant Professor, Class-I in General State Service, under the Commissionerate of Health, Medical Services and Medical Education and Research, Recruitment Rules, 2018.
2. In these rules, unless the context otherwise requires;
  - (i) "Medical candidate" means a candidate possessing the degree of M.B.B.S. and having registration under the State or Central Law pertaining to requiring Medical Registration;
  - (ii) "Annexure-I and Annexure-II" means annexure appended to these rules;
  - (iii) "Equivalent qualification" means the qualification as recognised by the Medical Council of India.
3. Appointment to the post of Assistant Professor Class-I in the General State Service, in the Basic Medical and Medical subjects mentioned in Annexure-I and Annexure-II at the Government Dental Colleges and attached hospitals under the Commissionerate of Health, Medical Services and Medical Education and Research, Gujarat State, shall be made either, -

- (a) by promotion of a person of proved merit and efficiency from amongst the persons, who,-
  - (i) have worked for not less than eight years in the cadre of Tutor, Class-II, in the General State Service, in concerned subject at the Government Dental Colleges and attached Hospitals under the Commissionerate of Health, Medical Services and Medical Education and Research, Gujarat State;
  - (ii) possesses the education qualification as prescribed in clause (b) of rule 4 for direct selection; and
  - (iii) have passed the qualifying examination for computer knowledge in accordance with the provisions of the Gujarat Civil Services Computer Competency Training and Examination Rules, 2006;

Provided that where the appointing authority is satisfied that a person having the experience specified in sub-clause (i) above is not available for promotion and it is necessary in the public interest to fill up the post by promotion even of a person having experience for a lesser period; it may, for reasons to be recorded in writing, promote such person who possesses experience of a period of not less than two-thirds of the period specified in sub-clause (i) above; or

(b) by direct selection.

4. To be eligible for appointment by direct selection to the post mentioned in rule 3, a candidate shall-

- (a) not be more than 43 years of age :

Provided that the upper age limit may be relaxed in favour of a candidate who is already in the service of the Government of Gujarat in accordance with the provisions of the Gujarat Civil Services Classification and Recruitment (General) Rules, 1967 :

Provided further that nothing contained in clause (b) of sub-rule (9) of rule 8 of the Gujarat Civil Services Classification and Recruitment Rules, 1967 shall be applicable in so far as relaxation of upper age limit as prescribed above is concerned :

(b) possess academic qualifications as specified in the Annexure-I and Annexure-II in concerned subject obtained from any of the University established or incorporated by or under the Central or a State Act in India; or any other educational institution recognised as such or declared to be a deemed as a University under section 3 of the University Grants Commission Act, 1956 or possess an equivalent qualification as recognised by the Medical Council of India ; and

(c) possess at least three years teaching experience as Junior Resident / Registrar / Demonstrator / Tutor in the concerned subject and one year as Senior Resident in the concerned subject as specified in the Annexures at recognized./ approved / permitted medical college as prescribed below:

(i) for the candidate possessing MD/MS degree in the subject as specified in Annexure-I and Annexure-II from Medical Council of India recognised medical college and have Threeyears teaching experience in the subject as Resident / Registrar / Demonstrator / Tutor in a recognised medical college either during the post-graduation course or after obtaining postgraduate degree in the subject:

Explanation : Senior Resident (Board Specialities) means one who is doing his residency in the concerned post-graduate subject after obtaining PG degree(MD/MS) and is below 40 years of age.

(ii) for the candidate possessing DNB/MDS/MBBS with M.Sc.(Medical) / M.Sc. with Ph.D./ M.Sc. with D.Sc. degree in the subjects as specified in the Annexure-I and Annexure-II and three years teaching experience after obtaining the requisite minimum qualifying post-graduate degree.

(d) possess basic knowledge of computer application as prescribed in the Gujarat Civil Services Classification and Recruitment (General) Rules, 1967 ; and

(e) possess adequate knowledge of Gujarati or Hindi or both. Explanation:

(iv) All medical teachers shall possess a basic University qualification or its equivalent qualification included in any one of the schedule appended to the Indian Medical Council Act, 1956.(102 of 1956) and also be registered in a State Medical / Dental Register or Indian Medical / Dental Register ;

(v) "Teaching experience" means teaching experience in Medical Colleges affiliated to a University established by law;

(vi) The candidate having equivalent post-graduate qualifications, which may be approved by the Medical Council of India from time to time, may be considered to have the requisite recognised qualification in the concerned subject.

5. The candidate appointed by direct selection shall be on probation for a period of two years.

6. The candidate appointed by direct selection during his probation period shall be required to pass the qualifying examination for computer knowledge in accordance with the provisions of the Gujarat Civil Services Computer Competency Training and Examination Rules, 2006.

7. The candidate appointed by direct selection during his probation period shall be required to undergo pre-service training and pass the post-training examination in accordance with the provisions of the Government Gazetted Officer's Pre-Service Training and Examination Rules, 1970.

8. The candidate appointed by direct selection shall be required to pass an examination in Hindi or Gujarati or both in accordance with the rules prescribed by the Government.

9. The candidate appointed either by promotion or by direct selection shall be required to undergo such training and pass such examination as may be prescribed by the Government.

10. The candidate shall be required to get himself, registered in a State Medical Council / Dental Register or Indian Medical Council / Dental Register under the Indian Medical Council Act, 1956/ Dental Council Act, 1948 at the time of making application for direct selection, if he is not so registered.

11. The candidate appointed by direct selection shall be required to furnish a security and surety bond in such form, for such amount and for such period as may be prescribed by the Government.

### ANNEXURE-I

#### BASIC MEDICAL SUBJECTS

(See rule-4(b))

| Sr. No. | SUBJECT             | QUALIFICATION   |
|---------|---------------------|---|
| 1.      | GENERAL PHYSIOLOGY. | M.D.(Physiology)/<br>M.B.B.S. with M.Sc.(Physiology)/<br>M.Sc.(Medical Physiology) with Ph.D.(Medical Physiology)/<br>M.Sc.(Medical Physiology) with D.Sc. (Medical Physiology)/ DNB (Physiology) |
| 2.      | GENERAL ANATOMY.    | M.S. (Anatomy)/<br>M.D. (Anatomy)/<br>M.B.B.S with M.Sc.(Anatomy)/<br>M.Sc.(Medical Anatomy) with Ph.D.(Medical Anatomy)/<br>M.Sc.(Medical Anatomy) with D.Sc.(Medical Anatomy)/<br>DNB (Anatomy) |
| 3.      | GENERAL PATHOLOGY.  | M.D.(Pathology)/<br>Ph.D.( Pathology)/<br>D.Sc.(Pathology)/<br>DNB (Clinical Pathology)   |

| Sr. No. | SUBJECT               | QUALIFICATION  |
|---------|-----------------------|--|
| 4.      | GENERAL PHARMACOLOGY. | M.D. (Pharmacology)/<br>M.B.B.S. with Ph.D.(Medical Pharmacology)/<br>M.Sc.(Medical Pharmacology) with Ph.D.(Medical Pharmacology)/<br>M.Sc.(Medical Pharmacology) with D.Sc.(Medical Pharmacology)/<br>DNB (Pharmacology)   |
| 5.      | BIOCHEMISTRY.         | M.D.(Biochemistry)/<br>M.B.B.S. with M.Sc.(Medical Biochemistry )/<br>M.Sc.(Medical Biochemistry) with Ph.D.(Medical Biochemistry)/<br>M.Sc.(Medical Biochemistry) with D.Sc.(Medical Biochemistry)/<br>DNB (Biochemistry)   |
| 6.      | MICROBIOLOGY.         | M.D (Bacteriology)/<br>M.D.(Microbiology)/<br>M.B.B.S. with M.Sc.(Medical Bacteriology)/<br>M.Sc.(Medical Microbiology) with Ph.D.(Medical Bacteriology)/<br>M.Sc.(Medical Bacteriology) with Ph.D.(Medical Bacteriology)/<br>M.Sc.(Medical Bacteriology) with D.Sc. (Medical Bacteriology )/<br>M.Sc.(Medical Microbiology) with Ph.D.(Medical Microbiology)/<br>M.Sc.(Medical Microbiology) with D.Sc. (Medical Microbiology)/<br>DNB (Microbiology) |

**ANNEXURE-II****MEDICAL SUBJECTS***(See rule 4(b))*

| Sr. No. | SUBJECT           | QUALIFICATION  |
|---------|-------------------|--|
| 1.      | GENERAL MEDICINE. | M. D.( Medicine )/<br>M.D. (General Medicine)/<br>DNB (General Medicine)   |
| 2.      | GENERAL SURGERY.  | M.S. (Surgery)/<br>M.S. (General Surgery)/<br>DNB (General Surgery)        |
| 3.      | ANAESTHESIOLOGY.  | M.D.(Anaesthesiology)/<br>M.S. (Anaesthesiology)/<br>DNB (Anaesthesiology) |

By order and in the name of the Governor of Gujarat,

**V. G. VAGHELA,**

Additional Secretary to Government.

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सत्यमेव जयते

# The Gujarat Government Gazette

## EXTRAORDINARY

PUBLISHED BY AUTHORITY

Vol. LIX ]

THURSDAY, JULY 26, 2018/SRAVANA 4, 1940

Separate paging is given to this Part in order that it may be filed as a Separate Compilation.

### PART IV-A

Rules and Orders (Other than those published in Parts I, I-A, and I-L) made  
by the Government of Gujarat under the Central Acts

#### TRIBAL DEVELOPMENT DEPARTMENT, NOTIFICATION

Sachivalaya, Gandhinagar, 26<sup>th</sup> July, 2018.

#### BIRSA MUNDA TRIBAL UNIVERSITY ACT, 2017.

**No. GS/SH/5/ANS/202016/319/P-1/G :-** In exercise of the powers conferred by the Sub Section (3) of Section 1 of the Birsa Munda Tribal University Act, 2017 (Gujarat Act No. 15 of 2017), (hereinafter referred to as “the said Act”), the Government of Gujarat hereby appoints the date 25<sup>th</sup> July, 2018 as the date on which the Provisions of the said Act shall come into force.

By order and in the name of the Governor of Gujarat,

**VIDHYUT PANDYA,**  
Joint Secretary to Government.

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# The Gujarat Government Gazette

## EXTRAORDINARY

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MONDAY, JULY 30, 2018 / SRAVANA 8, 1940

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### PART IV-A

Rule and Orders (Other than those published in Parts I, I-A, and I-L) made  
by the Government of Gujarat under the Central Acts

### FOREST AND ENVIRONMENT DEPARTMENT

### Notification

Sachivalaya, Gandhinagar, 25<sup>th</sup> July, 2018.

### Indian Forest Act, 1927 (XVI OF 1927)

**GVN/2018-(08)/JJM/15-03/18/GSF-07/F.--** In Exercise of the Powers conferred by the Section-20 of the Indian Forest Act, 1927(XVI OF 1927) in its Application to the State of Gujarat. The Government of Gujarat is pleased with reference of the Government Forest and Environment Department Notification No:-AVN-39/87/FLD-1287/468/V-3 dated: 19.02.1987 Published in Gujarat Government Gazette Part-1 Dated:30.04.1987 on page no. 698 to 701 to declare the land in Anjar Taluka of Kutch District specified in the schedule here under appended, to be "RESERVED FOREST" with effect from the date of issue of this Notification.

### SCHEDULE

Taluka : Anjar

District : Kutch

| Sr.<br>No. | Name of<br>Village | Survey<br>No. | AREA   |        | Boundaries  |
|------------|--------------------|---------------|--------|--------|---|
|            |                    |               | A.G.   | H.A.   |   |
| 1          | 2                  | 3             | 4      | 5      | 6   |
| 1          | Dhamadka<br>Part-1 | 425<br>Paiki  | 321.09 | 130.00 | North : Boundary of village Amrapar and Baniyari.<br>East : S.No. 210, 211,209.<br>South : Gauchar<br>West : S.No. 158, 156, Open land of T.S. No. 425 paiki, S.No. 155, Open land of T.S.No. 425 paiki |
|            | Part-2             | 425<br>Paiki  | 345.38 | 140.00 | North : Gauchar<br>East : S.No. 202, 199, Open land of T.S.No. 425, S.No. 197, 196, Open land of T.S.No. 425, Marag, Open land of T.S.No. 425, S.No. 247/1, Marag, S.No. 247/2, 248, 249,               |

| Sr. No. | Name of Village | Survey No.    | AREA          |               | Boundaries  |
|---------|-----------------|---------------|---------------|---------------|---|
|         |                 |               | A.G.          | H.A.          |   |
| 1       | 2               | 3             | 4             | 5             | 6   |
|         |                 |               |               |               | Marag, S.No. 2, 1, Open land of T.S.No. 425, Marag, S.No. 423/2, Marag, S.No. 423/2, S.No. 423/3, Marag, S.No. 423/3, Open land of T.S.No. 425, S.No. 422/2, 422/3.<br>South : Bhuj-Bhachau Highway.<br>West : S.No. 10/1,8,7, 6/2, 5, 3, Open land of T.S.No. 425, S.No. 32, 32/2, 33/1, Marag, S.No. 33/1, 33/2, 190, 191/1, 191/2, 192, 193, Marag, S.No. 193, 195, Open land of T.S.No. 425, S.No. 181, 179, 178, 175, 174/1. |
|         |                 | <b>Total:</b> | <b>667.07</b> | <b>270.00</b> |   |

By order and in the name of the Governor of Gujarat,

**MANISH C. SHAH,**  
Under Secretary to Government.

વન અને પર્યાવરણ વિભાગ

જાહેરનામું

સચિવાલય, ગાંધીનગર, ૨૫મી જુલાઈ, ૨૦૧૮.

**ક્રમાંક :** ગવન/૨૦૧૮-(૦૮)-જજમ/૧૫-૦૩/૧૮/જીએસએફ-૦૭/એફ.- ગુજરાત રાજ્યને લાગુ હોય તેટલે સુધી, સને ૧૯૨૭ના ભારતના જંગલો બાબતોના (સને ૧૯૨૭ના ૧૬માં) અધિનિયમની કલમ-૨૦ થી મળેલા અધિકારો અન્વયે ગુજરાત સરકાર ગુજરાત રાજ્ય પત્રના તા. ૩૦-૦૪-૧૯૮૭ ના પાના નં. ૬૮૮ થી ૭૦૧ પર પ્રસિધ્ધ કરેલી તા. ૧૯-૦૨-૧૯૮૭ના વન અને પર્યાવરણ વિભાગની અધિસૂચના ક્રમાંક : અવન-૩૮/૮૭/એફએલડી/૧૨૮૭/૪૬૮/વ-૩ ના અનુસંધાનમાં આ સાથે જોડેલી અનુસૂચિમાં નિર્દિષ્ટ કરેલ કચ્છ જિલ્લાના અંજાર તાલુકાની જમીનને આ અધિસૂચના પ્રસિધ્ધ થયાની તારીખથી ‘અનામત જંગલ’ તરીકે જાહેર કરે છે.

અનુસૂચિ

તાલુકો : અંજાર

જિલ્લો : કચ્છ

| અ. નં. | ગામનું નામ  | સર્વે નંબર | વિસ્તાર   |        | ચતુ:સીમા  |
|--------|-------------|------------|-----------|--------|---|
|        |             |            | એકર ગૂંઠા | હે.આર. |   |
| ૧      | ૨           | ૩          | ૪         | ૫      | ૬   |
| ૧      | ધમડકા ભાગ-૧ | ૪૨૫ પૈકી   | ૩૨૧.૦૮    | ૧૩૦.૦૦ | ઉત્તર : મોજે અમરાપર અને બાનીયારીનો સીમાડો<br>પૂર્વ : સ. નં. ૨૧૦, ૨૧૧, ૨૦૮<br>દક્ષિણ : ગૌયર<br>પશ્ચિમ : સ.નં. ૧૫૮, ૧૫૬, ટ્રા.સ.નં. ૪૨૫ પૈકી ખુલ્લી જમીન સ.નં. ૧૫૫, ટ્રા.સ.નં. ૪૨૫ પૈકી ખુલ્લી જમીન |



| અ. નં. | ગામનું નામ | સર્વે નંબર | વિસ્તાર   |        | ચતુ:સીમા  |
|--------|------------|------------|-----------|--------|---|
|        |            |            | એકર ગૂંઠા | હે.આર. |   |
| ૧      | ૨          | ૩          | ૪         | ૫      | ૬   |
|        | ભાગ-૨      | ૪૨૫ પૈકી   | ૩૪૫.૩૮    | ૧૪૦.૦૦ | <p>ઉત્તર : ગૌચર મોજે અમરાપર અને બાનીયારીનો સીમાડો</p> <p>પૂર્વ : સ. નં. ૨૦૨, ૧૮૯, ટ્રા.સ.નં. ૪૨૫ પૈકી ખુલ્લી જમીન સ.નં. ૧૮૭, ૧૮૬, ટ્રા.સ.નં. ૪૨૫ પૈકી ખુલ્લી જમીન, સ.નં. ૨૪૭/૧, મારગ, ૨૪૭/૨, ૨૪૮, ૨૪૯, મારગ સ.નં. ૨, ૧, ટ્રા.સ.નં. ૪૨૫ પૈકી ખુલ્લી જમીન, મારગ સ.નં. ૪૨૩/૨, મારગ, સ.નં. ૪૨૩/૨, સ.નં. ૪૨૩/૩, સ.નં. ૪૨૫ પૈકી ખુલ્લી જમીન ૪૨૨/૨, ૪૨૨/૩</p> <p>દક્ષિણ : ભુજ-ભચાઉ મારગ</p> <p>પશ્ચિમ: સ.નં. ૧૦/૧, ૮, ૭, ૬/૨, ૫, ૩, ટ્રા.સ.નં. ૪૨૫ પૈકી ખુલ્લી જમીન સ.નં. ૩૨, ૩૨/૨, ૩૩/૧, મારગ સ.નં. ૩૩/૧, ૩૩/૨, ૧૮૦, ૧૮૧/૧, ૧૮૧/૨, ૧૮૨, ૧૮૩, મારગ, સ.નં. ૧૮૩, ૧૮૫, ટ્રા.સ.નં. ૪૨૫ પૈકી ખુલ્લી જમીન, સ.નં. ૧૮૧, ૧૭૯, ૧૭૮, ૧૭૫, ૧૭૪/૧</p> |
|        |            | કુલ        | ૬૬૭.૦૭    | ૨૭૦.૦૦ |   |

ગુજરાતના રાજ્યપાલશ્રીના હુકમથી અને તેમના નામે,

મનીષ સી. શાહ,  
સરકારના ઉપ સચિવ.

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#### LEGAL DEPARTMENT

#### Notification

Sachivalaya, Gandhinagar, 12<sup>th</sup> July, 2018.

#### Bombay Industrial Relations Act, 1946.

**No.GK/26/2018/ICE/102018/1739/D** :- In exercise of the powers conferred by clause (23) of section 3 of the Gujarat Industrial Relations Act, 1946 (Bom XI of 1947) read with sub-section (2) of section 25J of the Industrial Disputes Act, 1947 (14 of 1947) the Government of Gujarat, in consultation with the High Court of Gujarat, hereby notifies Morbi also to be place at which the Judge (Labour Court) (Junior Division), Rajkot shall hold his Court sitting for a period of one week commencing from 3<sup>rd</sup> Monday of every month, for adjudication of Industrial Disputes, relating to any of the matters arising from the area falling under the jurisdiction of Morbi District, with effect on and from the 16<sup>th</sup> July, 2018.

By order and in the name of the Governor of Gujarat,

**H. H. VARMA,**

Deputy Secretary to Government.

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### PART IV-A

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#### PORTS AND TRANSPORT DEPARTMENT

#### NOTIFICATION

Sachivalaya, Gandhinagar, 23<sup>rd</sup> July, 2018.

**No.PT/2018/12/MVD/102018/831/KH** :- The following draft of rules which is proposed to be issued under section 176 of Motor Vehicle Act, 1988 (59 of 1988) is hereby published as required by sub-section (1) of section 212 of the aforesaid Act for the information of all persons likely to be affected thereby and notice is hereby given that the said draft will be taken into consideration by the Government of Gujarat on or after the expiry of thirty days from the date of publication of this notification in the *Official Gazette*.

2. Any objection or suggestion which may be received by the Principal Secretary to the Government of Gujarat, Ports and Transport Department, Sachivalaya, Gandhinagar from any person with respect to the said draft before the expiry of the aforesaid period, will be considered by the Government.

#### **DRAFT NOTIFICATION**

**No. PT/2018/12/MVD/102018/831/KH** :- In exercise of the powers conferred by section 176 of the Motor Vehicles Act, 1988 (59 of 1988), the Government of Gujarat hereby makes the following rules further to amend the Gujarat Motor Vehicles Rules, 1989, namely:-

1. These rules may be called the Gujarat Motor Vehicles (Amendment) Rules, 2018.

2. In Gujarat Motor Vehicles Rules, 1989, after rule 211, following rule shall be inserted, namely:-

**"211 A. Prohibition against release of motor vehicle involved in accident.-**

- (1) No court shall release a motor vehicle involved in an accident resulting in death or bodily injury or damage to property, when such vehicle is not covered by the policy of insurance against third party risks taken in the name of registered owner or when the registered owner fails to furnish copy of such insurance policy despite demand by investigating police officer, unless and until the registered owner furnishes sufficient security to the satisfaction of the court to pay compensation that may be awarded in a claim case arising out of such accident, and such security shall be deposited with the claims tribunal jurisdiction over the area in question within 15 days from the date of furnishing such security.
- (2) Where the motor vehicle is not covered by a policy of insurance against third party risks, or when registered owner of the motor vehicle fails to furnish copy of such policy in circumstances mentioned in sub-rule (1), or when registered owner of motor vehicle fails to furnish sufficient security to the satisfaction of the court to pay compensation, the motor vehicle shall be sold off in public auction as directed by the magistrate having jurisdiction over the area where accident occurred, on expiry of three months of the vehicle being taken in possession by the investigating police officer, and proceeds thereof shall be deposited with the Claims Tribunal having jurisdiction over the area in question, within fifteen days for the purpose of satisfying the compensation that may have been awarded , or may be awarded in a claim case arising out of such accident".

By order and in the name of the Governor of Gujarat,

**PRAKASH MAJMUDAR,**

Deputy Secretary to Government.

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#### PART IV-A

**Rules and Orders (Other than those published in Parts I, I-A, and I-L) made  
by the Government of Gujarat under the Central Acts**

#### PORTS AND TRANSPORT DEPARTMENT

#### NOTIFICATION

Sachivalaya, Gandhinagar, 1<sup>st</sup> August, 2018

#### **Inland Vessels Act, 1917.**

No: PT/2018/13/WKS/102013/792/GH-1 :- The following draft of rules which is proposed to be issued under sections 19R and section 67 read with sections 19 and 52 of the Inland Vessels Act, 1917 (1 of 1917) and taking into consideration of Inland Waterways Authority of India Model Rules, 2013 is published as required by sub-section (1) of the section 74 of the said Act, for information of all persons likely to be affected thereby and notice is hereby given that the said draft rules will be taken into consideration by the Government of Gujarat on or after the expiry of thirty days from the publication of this notification in the *Official Gazette*.

2. Any objection or suggestion which may be received by the **Principal Secretary** to the Government of Gujarat, Ports and Transport Department, Sachivalaya, Gandhinagar from any person with respect to the said draft rules on or before the expiry of the aforesaid period will be considered by the Government.

## DRAFT NOTIFICATION

No: PT/2018/13/WKS/102013/792/GH-1 :- In exercise of the powers conferred by sections 19R and section 67 read with sections 19 and 52 of the Inland Vessels Act, 1917 (1 of 1917), and in supersession of the Gujarat Inland Vessel (Survey, Construction and Safety) Rules, 2011 and Gujarat Inland Vessels Registration Rules, 2011 made in this behalf the Government of Gujarat hereby makes the following rules, namely:-

### 1. Short title and extent:-

- (1) The rules may be called the Gujarat Inland Vessels Rules, 2018.
- (2) These rules shall apply to inland vessels registered in the State of Gujarat or which ordinarily ply on inland waterways passing through the State of Gujarat except fishing vessels, Defense, coast guard vessels, or ship registered under the Merchant Shipping Act, 1958 (44 of 1958) subject to applicability of provisions under section 19S of the Act.

### Application

## CHAPTER - I GENERAL PROVISIONS

### 1.1 Definitions:-

1.1.1 In these rules, unless the context otherwise requires:-

### Definitions

- 1) '**Accommodation**' means any space intended for the use of persons normally living on board, or of passengers, and includes the galley, storage space for provisions, toilets and washing facilities, laundry facilities, landings and gangways, but not the wheel house;
- 2) '**Act**' means the Inland Vessels Act of 1917 (Central Act 1 of 1917);
- 3) '**Administration**' means The Gujarat Maritime Board having responsibility for maritime and /or inland waterways matters and in particular for the Administration of the rules;
- 4) '**Amidships**' means at the middle of the length L;
- 5) '**Approved**' means approved by the Administration;
- 6) '**Approved life-buoy**' means a life buoy approved by the Administration in accordance with either the specifications of the International Life Saving Appliances Code **or** the specifications

notified by the Administration for the approval of such lifesaving appliances carried on board the Inland Vessels;

- 7) '**Approved consultant**' means a naval architect or a Master FGM or a marine engineer MEO Class I qualified to certify the safe construction of hull/machinery of the vessel for the purpose of survey and duly approved by the Administration;
- 8) '**Bulkhead deck**' means the uppermost deck to which transverse watertight bulkheads are carried;
- 9) '**Buoyant apparatus**' means rectangular rafts approved by the Administration and fitted with buoyancy tanks / materials sufficient to support the approved number of persons in the water and includes buoyant deck seat;
- 10) '**Cargo-passenger vessel**' means a cargo vessel that is approved by the Administration to carry more than twelve passengers on identified services and that meets safety requirements set out in the these rules for that type of vessel and such other safety requirements specified by the Administration as are deemed necessary to provide a satisfactory level of safety;
- 11) '**Certificate of Survey**' means the certificate of survey granted under section 9 of the Act;
- 12) '**Class Survey of Classification Society**' means survey by a ship classification society to assign characters and class notations of inland vessel;
- 13) '**Classification society**' means an organization that complies with the standards adopted by the organization and is recognized, or otherwise authorized, by the Administration for the purpose of conducting inspections and surveys in accordance with applicable rules on behalf of the Administration;
- 14) '**Channel marks**' means any mark capable of being used as an aid to navigation by an inland vessel navigating in an inland waterway. These include coconut piles / bamboo marks, conspicuous building or structure, buoys and beacons;

- 15) '**Chief Examiner Inland Water Transport**' means an officer so appointed by the State Government in-charge of syllabus, examination and issue of certificates. In Gujarat Maritime Board, Chief Nautical Officer or Nautical Surveyor is Chief Examiner for all grades and both streams (Deck and Engine) of examination and certification as may be decided by Administration.
- 16) '**Chief Surveyor**' means an officer duly appointed by the State Government under these rules. In Gujarat Maritime Board, Chief Surveyor is Chief Nautical Officer or Nautical Surveyor as decided by Administration.
- 17) '**Company**' means the owner of the vessel or any other organization or person such as the manager who has assumed responsibility for operation of the vessel from the owner of the vessel and who, on assuming such responsibility has agreed to take over all the duties and responsibilities connected with vessel safety and the prevention of pollution;
- 18) '**Competent Authority**' means an authority as appointed by the State Government consisting of experienced Master FGM, Naval Architects and Marine Engineers. In Gujarat State, Competent Authority of Gujarat Maritime Board.
- 19) '**Convoy**' means a group of vessels, floating equipment or rafts towed or pushed by an inland mechanically propelled vessel;
- 20) '**Design Declaration**' means a format of application backed by vessel's preliminary General Arrangement Plans, Stability Booklets and preliminary Safety Plans.
- 21) '**Dumb Barge**' means a vessel that is not fitted with any means of propulsion;
- 22) '**Drifting**' means being driven by the stream with the engine stopped;
- 23) '**Engine room**' means the space in which the propulsion machinery and auxiliaries are installed;
- 24) '**Existing vessel**' means a vessel that is not a new vessel;
- 25) '**Ferry boat**' means any vessel providing a transport service across or along a waterway;



- 26) '**Fishing vessel**' is a vessel used for catching fish, or other living resources of the water;
- 27) '**Floating equipment**' means any floating structure carrying mechanical installations and intended for work on waterways or in ports (e. g. a dredger, elevator, sheer-legs or crane);
- 28) '**Floating installation**' means a raft or any other structure, object or assembly capable of navigation not being a vessel or floating equipment;
- 29) '**Form**' means form appended to these rules;
- 30) '**Freeboard**' means the distance measured vertically downwards amidships from the upper edge of the deck line to the position at which the upper edge of the appropriate load line mark lies;
- 31) '**G.T**' means gross tonnage;
- 32) '**Government**' means Government of Gujarat unless otherwise specified;
- 33) '**Inland vessel**' of '**inland mechanically propelled vessel**' means a mechanically propelled vessel, which ordinarily plies on inland water, but does not include fishing vessels and a ship registered or required to be registered under the Merchant Shipping Act, 1958 (44 of 1958);
- 34) '**Inland water**' means
- (a) any canal, river, lake or other navigable water within a State,
  - (b) any area of any tidal water deemed to be the inland water as defined by the Central Government under section 70 of the Act.
  - (c) waters declared by the Central Government to be smooth and partially smooth waters under clause (41) of section 3 of the Merchant Shipping Act, 1958 (44 of 1958);
- 35) '**Length and breadth of a vessel**' means maximum length and breadth of a vessel;
- 36) '**Lock**' means confined section of river or canal where level can be changed for raising and lowering boats between adjacent sections by use of gates and sluices;
- 37) '**Lock basin**' means the approach to the lock narrowing towards the lock from upstream and downstream;

- 38) **'Margin line'** is a line drawn at least 76 mm below the upper surface of the deck from which freeboard is measured;
- 39) **'Master'** means the person having command of a vessel and includes any person in charge of a vessel;
- 40) **'Mechanically propelled vessel'** means every description of vessel propelled wholly or in part by electricity, steam or other mechanical power including dumb vessel towed by the mechanically propelled vessel and vessel propelled by outboard motor;
- 41) **'Miles'** means nautical miles;
- 42) **'Name of the vessel'** includes the registration mark referred to in section 19H of the Act;
- 43) **'Navigable channel'** means the channel intended for uninterrupted passage of vessels;
- 44) **'New vessel'** means a vessel the keel of which is laid or that is at a similar stage of construction on or after the date of these rules coming into force;
- 45) **'Operating Areas'** For the purpose of these rules where applicable, the inland waterways operating area is divided as follows:
- a) Zone-1: A zone where maximum significant wave height does not exceed 2.0 meters.
  - b) Zone-2: A zone where maximum significant wave height does not exceed 1.2 meters.
  - c) Zone-3: A zone where maximum significant wave height does not exceed 0.6 meters.
- 46) **'Organization'** means the International Maritime Organization;
- 47) **'Owner'** means the owner of a vessel and carries same meaning as Company ' as defined above;
- 48) **'Passenger'** includes any person carried in a mechanically propelled vessel other than the master and crew and the owner, his family and servants;
- 49) **'Passenger vessel'** means any vessel built and operated to carry more than 12 passengers and that is not a cargo-passenger vessel;
- 50) **'POB (Person on board) or complements'** means total number of people to be taken on board, i.e. crew + passengers.

- 51) '*Pleasure vessel*' means a vessel that is used, or, being a vessel in the course of construction, is intended to be used, wholly for recreational or sporting activities;
- 52) '*Recognized standards*' are standards accepted by the Administration, which may include applicable international or national standards or standards adopted by a classification society;
- 53) '*Registered Authority*' means the registering Authority appointed under the Act;
- 54) '*Restricted visibility*' means any condition in which visibility is restricted by fog, mist, heavy rainstorms, sandstorms, or any other similar causes;
- 55) '*Sailing vessel*' means any vessel under sail, without using the propelling machinery;
- 56) '*Safety Plan*' a plan which shows, the disposition of Life Saving Appliances, Fire Fighting Appliances, Light and Sound Signal System. This plan needs to be approved by the competent authority.
- 57) '*Schedule*' means the schedule appended by these Rules;
- 58) '*Short voyage*' means a voyage of 8 hours or lesser duration;
- 59) '*Survey*' means the survey of a mechanically propelled vessel under the Act or these Rules;
- 60) '*Surveyor*' means a surveyor appointed under the Act or in accordance with these rules and includes Chief Surveyor;
- 61) '*Tidal water*' has the meaning assigned to it in clause (49) of section 3 of the Merchant Shipping Act, 1958;
- 62) '*Underway*' means a vessel which is not at anchor or made fast to the shore or aground;
- 63) '*Vessel*' means an inland vessel or inland mechanically propelled vessel;
- 64) '*Vessel not under command*' means a vessel, which through some exceptional circumstances is unable to man oeuvre as required by these rules and is therefore unable to keep out of the way of another vessel.

**65)** '*Voyage*' includes the plying of a mechanically propelled vessel at or about any place.

**66)** '*Wheelhouse*' means the space in which all equipment necessary for navigating and controlling the vessel is installed.

1.1.2 Words and expressions used, but not defined in these rules, shall have meaning assigned to them in the Act.

## **1.2 Exemptions:-**

1.2.1 The Administration may exempt from the application of all or any part of these rules:

- a) vessels or classes of vessels operating on navigable waterways as designated by the Administration, where it considers that the sheltered nature and conditions of such operations are such as to render the application of any specific provisions of the rules unreasonable or unnecessary; and / or
- b) Vessels the keels of which were laid down before the entry into force of these rules are exempted for a period of twenty four (24) months or as deemed appropriate by Administration.

### **Exemptions**

1.2.2 The Administration may authorize, in respect or navigation on its National / State waterways, exemptions from one or more provisions of these rules for the limited local voyages or in harbor areas provided that it complies with such other requirements that are, in the opinion of the Administration, adequate for the intended voyage. Such exemptions and the voyages or areas to which they apply shall be specified in the vessel's Certificate of Survey.

1.2.3 Where a vessel is exempted from these rules under **1.2.1 (a)**, the Administration may require compliance with the provisions of these rules as far as is practicable and reasonable.

1.2.4 The Administration may exempt a vessel that embodies features of a novel kind from any of the provisions of these rules, the application of which might seriously impede research into development of such features and their incorporation in vessels. Any such vessel shall, however, comply with such safety

requirements that, in the opinion of the Administration, are adequate for the service for which it is intended and are such as to ensure the overall safety of the vessel.

### **1.3 Force Majeure:-**

- 1.3.1 A vessel which is not subject to the provisions of these rules at the time of its departure on any voyage shall not be subject to such provisions on account of any deviation from its intended voyage due to stress of weather or any other leading to force majeure.
- 1.3.2 In applying the provisions of these rules, the Government shall give due consideration to any deviation or delay caused to any vessel owing to stress of weather, or any other cause leading to force majeure.

### **Force Majeure**

### **1.4 Equivalents:-**

Where the rules require that a particular fitting, material, appliance, apparatus or type thereof, shall be fitted or carried in a vessel, or that particular provision shall be made, the Administration may allow any fitting, appliance, apparatus or type thereof to be fitted or carried, or any other provision to be made in that vessel, if it is satisfied by trials thereof or otherwise that such fitting, material, appliance, apparatus or type thereof is at least as effective as such required by these rules.

### **Equivalents**

### **1.5 Standards:-**

- 1.5.1 The construction, installation, structural strength, fittings, material, appliances and apparatus unless expressly provided by these rules, shall be of recognized standards.
- 1.5.2 In addition to the requirements and standards referred to in these rules, other requirements and standards recommended by the other statutory bodies may be applied whenever the Administration considers such requirements and standards to be appropriate.

### **Standards**

**1.6 Carriage of passengers:-**

- 1.6.1 Inland vessels shall not carry any passengers unless specifically authorized by the Administration.
- 1.6.2 The maximum number of passengers carried on board a passenger vessel or a cargo-passenger vessel shall not exceed the number of identified on Certificate of Survey.
- 1.6.3 A notice showing the maximum number of passengers permitted to be carried on specific decks and in specific spaces, calculated in accordance with rules, shall be clearly displayed at the access to each such deck and other prominent spaces.

**Carriage of  
Passengers****1.7 Plans, signs, instruction manuals, name plates and languages:-**

- 1.7.1 All name plates, signs, instructions, notices, plans and documents on board vessels, relating to safety and operation of the vessel and its machinery, shall be drawn up in English and Hindi or Gujarati.
- 1.7.2 All mechanically propelled inland vessels shall carry adequate including drawings, plans and instruction manuals necessary for operation and safety of life.

**Plan, Signs,  
Instruction  
Manuals,  
Name Plates  
and  
Languages****1.8 Casualties and incidents:-**

In the event of a casualty or incident involving the vessel resulting in loss of life or vessel being materially damaged, stranded, abandoned or lost, the master or the Company shall act as detailed in Chapter - V of these rules.

**Casualties  
and Incidents****1.9 Repairs, Alterations, Modifications of major character:-**

- 1.9.1 The repairs, alternations and modifications of a major character and out fitting related thereto on existing vessels should meet the requirements of new vessel to such an extent as the Administration. The Owner shall inform and take approval of the Administration of modifications before such alternations and modifications are carried out.

**Repairs,  
Alterations  
Modifications**

1.9.2 For the purpose of these rules, the following repairs, alternations and modifications shall be recognized as being of "major character"

- a) Any changes that substantially alter the dimensions of the vessel,
- b) Any changes that substantially increases vessel's service life, or
- c) Any conversion that alters the functional aspects of the vessel.

**1.10 Management of safety and environmental protection:-**

1.10.1 The Company and the master of the vessel shall be responsible for compliance with the applicable provisions of these rules and for the management of the vessel so as to achieve safety in operation and the environment.

**Management  
of Safety and  
Environmental  
Protection**

1.10.2 The Company and the master of the vessel shall comply with requirements of the Government in relation to the management of safety and environmental protection.

**1.11 Vessel identification:-**

The Registration Mark assigned by the registering authority under section 19H the Act shall be entered on the Certificate of Survey and also displayed Conspicuously as per requirements of these rules.

**Vessel  
Identification**

**1.12 Official Log Book:-**

1.12.1 The master and engineer / driver of the vessel shall keep an official log book in Form No.1 appended to these rules and shall make, or cause to be made, such entries in that log book as required.

**Official Log  
Book**

1.12.2 An entry in an official log book shall be made by the Master, Engineer/ Driver or officer-in-charge of the inland vessel:

- a) As soon as possible after the occurrence to which it relates; and
- b) The date and time of the occurrence and the entry.

1.12.3 An entry in the official log book shall be made by the Master or the officer-in-charge and counter signed by the Competent Authority carrying out any inspection of the vessel stating the outcome of the inspection and action taken if any.

**1.13 Inland Vessel State Inspection:-**

- 1.13.1 Every vessel when in a port of another State is subject to inspection by officers duly authorized by such Administration in so far as this inspection is directed towards verifying that the certificates issued under Chapter - II are valid.
- 1.13.2 Such certificates, if valid, shall be accepted unless there are clear grounds for believing that the condition of the vessel or of its equipment does not correspond substantially with the particulars of any of the certificates or that the vessel is not river worthy.
- 1.13.3 In the circumstances specified in **1.13.2** or where a certificate has expired or ceased to be valid, the officer carrying out the inspection shall take steps to ensure that the vessel shall not leave the port unless it can proceed to the next port of call, or leave the port for the purpose of proceeding to an appropriate repair yard, without danger to the vessel or persons onboard.
- 1.13.4 The officer carrying out the inspection shall make an entry in the 'Official log book' stated in rules **1.12** above.

**Inland  
Vessel State  
Inspection**



**CHAPTER - II****SURVEY OF INLAND MECHANICALLY PROPELLED VESSELS****2.1 Categorization of Vessels:-**

2.1.1 For the purpose of survey inland vessels may be classified into two **Categorization of Vessels** categories as follows:-

- a) Category A:- All Inland Vessels constructed for operating / operating in Zone 1
- b) Category B:- All Inland Vessels other than Category A

**2.2 Types of Survey:-**

2.2.1 Every vessel to which the provisions of the Act and these rules apply shall be subjected to the surveys specified herein:- **Types of Survey**

- I.** Initial Survey – survey before the vessel is put in service.
- II.** Periodical Survey – once in every twelve months.
- III.** Dry Docking Survey as per details in 2.2.4 below.
- IV.** Special Survey – Additional surveys as occasion demands.

The Initial Survey shall be aimed at ensuring the following:-

- i. The vessel's construction is meeting the safety standards and is **Initial Survey** in accordance with approved plans and design.
- ii. The freeboard mark and draft marks are appropriately marked.
- iii. The tonnage computation of the vessel is approved by Administration.
- iv. Safety Equipment plan is approved by the Administration.
- v. Stability Booklet of the vessel is prepared by the Designer and approved by the Administration.
- vi. Vessel is adequately equipped to effectively contribute to Prevention of Pollution of Inland Waterways.

2.2.2 The survey to include a complete inspection of the hull, machinery and equipment to ensure that arrangements, material, scantlings of hull, main and auxiliary machinery, life-saving appliances, fire appliances and other equipment fully comply with the requirements under the Act and these rules as are applicable in its case provided

that the bottom of the vessel which has been surveyed or examined by a surveyor before the vessel is launched may be exempted unless the surveyor has special reasons for considering it necessary.

- 2.2.3 The periodical survey of the vessel shall include an inspection of the whole of the hull, machinery and equipment to ensure that hull, machinery and equipment are in satisfactory condition and fit for the service for which the vessel is intended and that she complies with the requirements under the Act and these rules as are applicable in its case.

**Periodical  
Survey**

- 2.2.4 The Dry Docking survey as and when becoming due shall be carried out together with the periodical / special survey. All Category A vessels shall undergo a dry docking survey at interval not exceeding 3 years and category B vessels at interval not exceeding 5 years. The dry docking survey shall be carried out by a surveyor in a dry dock or on a slipway such that all portions of hull external can be examined during the light condition to the satisfaction of the surveyor. If a dry docking survey is carried as part of a Special Survey (even if the periodical survey is not due), periodical survey shall be carried out as part of the dry docking survey and date of the periodical survey harmonized with the dry docking survey.

**Dry Docking  
Survey**

- 2.2.5 A certificate of survey shall remain valid if the vessel undergoes and meets the requirements of survey detailed in sub-rule 2.2.1

- 2.2.6 A Special Survey either general or partial or dry docking survey, according to the circumstances shall be carried out:-

**Special Survey**

- (a) If the efficiency or performance of the equipment's of the vessel has changed or whenever a request for extension of certificate of survey is being considered.
- (b) Every time a defect affecting safety of the vessel is discovered or an accident (such as Collision, Grounding and capsizing) occurs which affects the safety of the vessel.
- 2.2.7 The special survey shall be conducted in such a manner so as to ensure that the necessary repairs or renewals have been effectively made, that the material and workmanship of such repairs or renewals

are in all respects satisfactory and that the vessel is fit for the service for which she is intended.

2.2.8 On the application made by the owner or his authorized representative or master of an Inland Vessels, as per procedure laid down in sub-rule 2.6.1 of these rules, the validity of a certificate of survey may be extended up to three months on the exigencies of the situation and if the surveyor recommends for the grant of the certificate for that period.

2.2.9 If exigencies of the situation warrant dry docking period may be revalidated beyond the periods stipulated in sub-rule 2.2.4 of these rules on application by the owner, or his authorized representative or master of an Inland Vessel on deposit of full survey fees. The extension of validity of the docking period shall not exceed one year provided the surveyor recommends the grant of validity for that period and the Inland Vessel is surveyed by him.

### **2.3 Appointment of Surveyors and duties of surveyor:-**

2.3.1 Nautical Surveyor including Chief Surveyor are Surveyor. Master FGM and Marine Engineer MEO Class I working with Administration are notified as Surveyor in charge through *Official Gazette*.

2.3.2 Following persons may be appointed as Surveyor in Charge subject to each of them individually seeking the authorization of the Chief Surveyor and notified by the State Government in the *Official Gazette*:

- 1) MEO Class II working with Administration.
- 2) Surveyors of Indian Register Shipping (IRS),
- 3) Surveyors of International Classification Society which is member of IACS,
- 4) Individuals appointed as Surveyors by the Chief Surveyor.

2.3.3 No person shall be appointed as Chief Surveyor unless he meets the qualifications and experience enumerated in any one of the following:

**Appointment  
of Surveyors  
& duties of  
Surveyors**

- a) Holder of Extra Master Certificate of Competency and has served in the capacity of a Surveyor for a minimum period of 5 years in the Directorate General of Shipping / State Inland Water Transport Department / State Maritime Board.

**Qualification-  
ion of Chief  
Surveyor**

2.3.4 A Chief Surveyor shall discharge the following duties; namely:-

- (a) Receive applications for survey of vessels, and confirm that they are in order.
- (b) Fix the date and place of surveys and conduct the survey as per rules.
- (c) Verify and ensure that the vessels are constructed as per the approved drawings, General Arrangement Plans etc.
- (d) Determine whether the hull of the vessel is in proper condition and fit for service.
- (e) Test the stability of the vessel so as to ensure safety against capsizing under any conditions;
- (f) Ascertain that the machinery and machinery layout, propeller, shafting, gears and steering, pipe lines such as bilge and ballast, oil transfer etc., wheel house, crew accommodation, passages galleys, stores, service place etc., ventilation, change of air for engine room etc., life-saving, fire-fighting, light and sound signals, navigation and communication equipment etc. are in order and that generally the vessel is fully equipped for the safety and convenience of the crew passengers;
- (g) Issue declaration of survey to the vessel surveyed by him to the owner or master of the vessel;
- (h) Give copies of documents on payment of fees specified in these rules and maintain accounts of all dues connected with survey and miscellaneous receipts;

**Duties of  
Chief  
Surveyor**

2.3.5 The surveyor should possess any of the following qualifications and experience:

- a) Master Mariner with 5 years of sailing experience out of which one year command on FG ships and holder of master's FGM certificate issued by Director General of Shipping, Government of India or equivalent international certificate recognized by Government of

**Qualification  
of Surveyor**

India **or**

- b) Marine Engineer in possession of minimum First / Second class Motor / Steam MOT Certificate issued by Director General of Shipping, Government of India or equivalent certificate recognized by Government of India and having minimum 5 years of sailing experience after first certificate of competency of which minimum 2 years sailing experience must be at Management Level, **or**
- c) As decided by Chief Surveyor and approval of competent authority.

In case of surveyor being an agency, the concerned agency shall have personnel with above qualification on their panel / role.

2.3.6 The Surveyor and Surveyor in-charge shall be subordinate to the Chief Surveyor and shall discharge the following functions and duties, namely:-

- (a) Attend to the survey of vessels as per directions from the Chief Surveyor;
- (b) Maintain registers of vessels;
- (c) Conduct periodical inspection as per statutory provisions on board vessels and verify the records to be maintained on board, validity of crew certificate, survey certificate, lifesaving appliances, firefighting appliances, navigation and communication equipment's, machineries etc. In case of default he shall detain the vessel and make necessary recommendations for suspension / cancellation of the certificate or registration / survey to the competent authority. Such detention order shall be in Form 11(a);

**Duties of  
Surveyor**

2.3.7 Every surveyor shall, for the purposes of any survey made by him, deemed to be a public servant within the meaning of the Indian Penal Code.

## **2.4 Powers of Surveyors:-**

**Powers of  
Surveyors**

2.4.1 For the purpose of a survey, the surveyor may, at any reasonable time, go on board any inland mechanical propelled vessel, and may inspect the mechanically propelled vessels and every part thereof, including the hull, engines and other machinery, and all equipment and articles on board.

Provided that he shall not unnecessarily hinder the loading or unloading of the mechanically propelled vessel, or unnecessarily detain or delay her from proceeding on any voyage.

- 2.4.2 The owner, master and officers of the mechanically propelled vessel, shall afford to the surveyor all reasonable, facilities for the survey, and all such information respecting the mechanically propelled vessel, and her machinery or any part thereof, and all equipment and articles on board, as he may require for the purposes of a survey.

**2.5 Fees in respect of survey:-**

- 2.5.1 Before a survey is commenced, the owner or master of the mechanically propelled vessel, to be surveyed shall pay the fees payable under the Act and under these rules as specified by the Administration.
- 2.5.2 Where a resurvey is necessitated on account of any default, act or omission on the part of the owner or master or any member of the crew the owner shall be liable to pay such fee as may be payable for a survey.
- 2.5.3 Any fee payable under the Act or under these rules shall be paid by under such head of account as the Administration may specify from time to time.
- 2.5.4 No fee paid under the Act or these rules shall be refundable.
- Fee in respect of Survey**

**2.6 Survey for new construction:-**

- 2.6.1 Category A vessel shall be designed constructed and maintained under the survey of a classification society who is a member of International Association of Classification Societies (IACS) by the Administration.
- 2.6.2 Category B vessels shall be designed, constructed and maintained either under class survey of a recognized classification society stated in 2.6.1 above or under the authority of the Chief Surveyor, assisted by Surveyors appointed under sub rule 2.3.2 following Classification Society (member of IACS) Rules for construction of Inland Vessels acceptable by Administration.
- Procedure for Survey**

- 2.6.3 The owner or builder who intends to build a vessel shall, before laying the keel of the vessel, submit a preliminary application expressing his intention to build a vessel, in Form 1 A along with particulars and details specified therein, to the Chief Surveyor so that the progress of construction can be monitored by the Surveyor from the very beginning at different stages of construction.
- 2.6.4 Upon receipt of application as above, the Chief Surveyor shall verify the same and decide the category to which the vessel is to be included and intimate it to the applicant.
- 2.6.5 The date and place of laying the keel for the new vessel shall be intimated to the Chief Surveyor, in writing, for the purpose of official records of the date of laying the keel.

## **2.7 Application for Survey:-**

- 2.7.1 Every application for survey shall be made to the chief surveyor or surveyor notified by the Government by the registered owner or his authorized agent or master or in case of minor his / her legal / natural guardian.
- 2.7.2 The application shall be made in Form 2 and shall contain the particulars required therein.
- 2.7.3 Every application for vessel's periodical, dry docking or special survey shall be accompanied by the following records in respect of the vessel, namely:
- i. Copy of registration of the vessel or records evidencing the title of the applicant in respect of the vessel;
  - ii. Copy of latest certificate of Survey, if it is an existing vessel and in case the vessel undergoing the first initial survey, a declaration to that effect;
  - iii. Authorization from the registered owner, in the cases where the applicant is not the registered owner;
  - iv. Documentary proof of his legal / natural guardian in case of minor;
  - v. Challan receipt / appropriate document evidencing payment of such fees to the Administration for the survey;

## **Application for Survey**

- vi. Duplicate of latest declaration, if any, given to the owner;
- vii. The name of port or place at which survey is expected to be carried out;
- viii. Such other records as are necessary for and in connection with the survey;

2.7.4 For application for the initial survey of Inland Vessel either newly constructed or existing vessel being surveyed for the first time, application shall be accompanied by:-

- a) Particulars in Form 3
- b) General Arrangement Plans, safety equipment plans, structural drawings, freeboard marking, shell expansion, machinery and machinery layout, propeller, shafting, gears and steering plans, pipeline such as bilge and ballast, oil transfer etc.
- c) Particulars of wheel house, crew accommodation, passages, galleys stores / service place etc.
- d) Particulars of ventilation / change of air of engine room, crew accommodation etc.
- e) Particulars of life saving, firefighting, light and sound signals, navigation and communication equipment.
- f) Computation of the strength of the hull, decks, bulkhead including collision bulkhead etc;
- g) Computation of stability, free board clearly showing amount of cargo and method of its placement, depicting calculation of meta centric height;
- h) all possible data from the Ex Registering Authority regarding stability, drawings as mentioned above etc. and builders certificate, if available; Provided that, if previous surveying authority is unable to supply such data, for any reason and communicates the same in writing, the owner shall produce such communication;
- i) Certificate of machineries from manufacturers or classification societies or surveyors. Copy of Registration Certificate of vessel, if applicable.



- 2.7.5 On receipt of an application for survey, the chief surveyor / surveyor shall fix mutually convenient date, time and place of survey which shall not be later than 7 working days and shall give intimation thereof to the applicant in Form 4. Chief Surveyor / Surveyor can nominate Surveyor in Charge to conduct survey.

**2.8 Manner of Survey:-**

**Manner of  
Survey**

- 2.8.1 The survey shall be made at such time, place and date as may be specified in the intimation referred to in rule 2.7.5 Provided that the surveyor may postpone the survey for reasons to be recorded and in the case of such postponement, the survey shall be made within 7 working days and no further postponement should be allowed. The fresh intimation, in the manner herein before specified shall be given;
- 2.8.2 Provided further that the surveyor may require the vessel to be brought over to dry dock or any other suitable place, if such a step is, for reasons to be recorded, considered necessary by the surveyor for the purpose of the survey and no survey need be made in pursuance of an application unless the direction of the surveyor in this regard are complied with by the applicant:
- 2.8.3 The survey shall be made by actual inspection of the vessel and every part thereof including the machinery and any other equipment, fittings, appliances in the vessel, the inspection of which is relevant for the purposes of the Act.
- 2.8.4 During the survey, the surveyor shall satisfy himself as to the requirements specified in section 7 of the act and applicable clauses of these rules.
- 2.8.5 If, as a result of the survey any defect is noticed in the vessel or in any part thereof or in any machinery or article therein.
- a) Intimation of such defect shall be given to the applicant with a direction to rectify such defect within the period to be specified in such intimation. Form 5.
- b) On receipt of information from the applicant regarding rectification of such defects, further survey shall be made within 7 working days

and during survey, the surveyor shall, before giving the declaration referred to in section 7 of the Act, satisfy himself as to the rectification of such defect.

- c) The surveyor in charge shall not give the declaration referred to in section 7 of the Act unless and until the defect is rectified as directed by him.

2.8.6 Where a vessel is offered for survey in pursuance of an application in that behalf by the owner is withdrawn by the owner owing to any default or any other act or conduct by the owner and the survey is hindered or made impossible no survey of the vessel shall be made based on the application; provided that nothing in this sub rule shall prevent the owner from filing a fresh application for survey.

2.8.7 The surveyor shall, as and when so required by the Administration, furnish to the Administration such information as he has in respect of any vessel and if he is not in possession of such information, he shall obtain such information from the owner or master and furnish it to the Administration.

2.8.8 The owner or master of the vessel shall be bound to give such information on a requisition in that behalf by the surveyor.

2.8.9 Notwithstanding anything contained in these rules, the surveyor is authorized to go on board any vessel and inspect it or any part thereof or any machinery or article thereon relevant to the purpose of the Act, if such inspection becomes necessary for or in connection with any of the purpose of the Act.

2.8.10 No surveyor shall enter a vessel for the purpose of survey of the vessel under the Act except under a notice to the owner or master of the vessel. Such survey shall be carried out in the presence of owner's representative (s) during daytime, preferably from sunrise to sunset except when demanded otherwise by circumstances involving exigencies / emergencies.

## **2.9 Declaration of Survey:-**

2.9.1 The declaration referred to in section 7 of the Act shall be in a Form 6 and shall be given in duplicate forthwith upon satisfactory completion of Survey.

**Declaration of  
Survey**

- 2.9.2 The owner or master to whom the declaration is given shall within fourteen days after the date of receipt thereof, sends the declaration to such officer, as the Administration may be notification appoint in this behalf.
- 2.9.3 If the owner or master fails to send a declaration as required by section
- 2.9.4 Above (sub section 8(1) of the Act), he shall forfeit s sum as prescribed in the Act.
- 2.9.5 The surveyor giving such a declaration shall obtain from the owner or master of the vessel the current or expired certificate of survey in respect of the vessel and forward the same to the Chief Surveyor with information regarding the survey made by him of the vessel and regarding the declaration given by him to the owner under section 7 of the Act.

**2.10 Notice regarding Certificate of Survey:-**

A notice under clause (b) of sub-section (1) of section 9 of the Act shall be in Form 7 and shall contain the particulars specified therein.

**Notice  
Regarding  
Certificate of  
Survey**

**2.11 Application for certificate of Survey:-**

An application for a certificate of survey shall be made to such officer authorized under sub section (2) of section 9 of the Act in Form 8 and shall contain the particulars specified therein. In case State Government sets up State Maritime Board / Authority / Commission under section 9 (4) of the Act, such body may be empowered for overall development of maritime activities in the State including authorizations under sub section (2) of section 9 of the Act.

**Application  
for Certificate  
of Survey**

**2.12 Certificate of Survey:-**

The certificate of survey in respect of class A vessels shall be in Form 9 and in respect of class B vessels shall be in Form 10 and shall contain the details specified therein.

**Certificate of  
Survey**

**2.13 Temporary Permit:-**

The Surveyor who conducted the survey may, without following the procedure laid down in section 9 of the Act, grant a permit to be effective for a period which shall not in any case exceed forty-five days, to authorize the inland mechanical propelled vessel to proceed on voyage or use in service temporarily pending the issue of the certificate of survey.

**Temporary  
Permit**

**2.14 Certificate of survey to be affixed in conspicuous part of mechanically propelled vessel:-**

The owner or master of every mechanically propelled vessel, for which a certificate of survey has been granted, shall forthwith, on the receipt of the certificate, cause one of the duplicates thereof to be affixed and kept affixed so long as it remains in force and the mechanically propelled vessel is in use, on some conspicuous part of the mechanically propelled vessel where it may be easily read by any persons on board.

**Display of  
Certificate of  
Survey**

**2.15 Term of certificates of Survey:-**

Any Certificate of Survey issued under the provisions of this Chapter shall be Subject to terms of certificate of survey contained in section 11 of the Act.

**Terms of  
Certificate of  
Survey**

**2.16 Change of name:-**

2.16.1 Where a change of name of a vessel in respect of which a certificate of survey has been granted under the Act is required, the owner or master of the vessel shall forward the certificate of survey to the authority who issued the certificate along with an application for change of name of the vessel entered in the certificate of survey.

**Change of  
Name**

2.16.2 Such application shall be in Form 11 and shall be contain the particulars required therein.

2.16.3 Such officer shall, after due enquiry by himself or through any other officer satisfy that the new name is not allotted to any other vessel and cause such change as is necessary to be effected in the certificate of survey, which shall thereupon be returned to the owner after due process of carving / marking of the changed name on vessel and upon due changes effected by the Registering Authority in Registration Certificate and Book of Registration.

**2.17 Renewal of certificates of survey:-**

After a certificate of survey has ceased to be in force, the same shall only be renewed after a fresh survey of the mechanically propelled vessel to which the certificate relates, has been held in accordance with the provisions of this Chapter, save so far as any relaxation thereof may be prescribed.

**Renewal of  
Certificate of  
Survey****2.18 Suspension or Cancellation of certificate of Survey:-**

A certificate of survey or any endorsement thereon made under section 10 A of the Act may be suspended or cancelled by the Administration, if that Administration has reason to believe:

**Suspension or  
Cancellation  
of Certificate  
of Survey**

- (a) That the declaration by the surveyor of the sufficiency and good condition of the hull, engines or other machinery or of any of the equipment of the mechanically propelled vessel has been fraudulently or erroneously made; or
- (b) That the certificate has otherwise been granted upon false or erroneous information; or
- (c) That since the making of the declaration the hull, engines or other machinery, or any of the equipment of the mechanically propelled vessel have sustained any material injury, or have otherwise become insufficient.

**2.19 Delivery of expired or cancelled certificate:-**

- 2.19.1 The owner or master of every mechanically propelled vessel, for which a certificate of survey has expired or has been cancelled shall cause certificate of survey, which has expired or has been suspended or cancelled, to be delivered up to officer who had issued the certificate of survey.

**Delivery of  
Expired or  
Cancelled  
Certificates of  
Survey**

- 2.19.2 Where an endorsement on any certificate of survey for the State has been suspended or cancelled, the certificate of survey to be delivered up to such officer who had issued the endorsement in order that particulars of the suspension or cancellation of the endorsement may be noted on the certificate.

**2.20 Report of suspension or cancellation of certain certificates:-**

If the Government suspends or cancels endorsement made under section 10 A of the Act on a certificate of survey, it shall report the fact of suspension or cancellation, together with the reasons thereof, to the State Government which (or whose delegate) granted the certificate.

**Reporting  
Suspension or  
Cancellation of  
Certificates  
issued by other  
Government**

**2.21 Survey by two surveyors:-**

2.21.1 A survey shall ordinarily be made by one surveyor, but two surveyors may be employed if the Government, by order in writing, so directs at any place of survey, or especially in the case of any particular mechanically propelled vessel or class of mechanically propelled vessel at any such place.

**Survey by  
Two  
Surveyors**

2.21.2 If the surveyor making a survey of a mechanically propelled vessel refuses to give a declaration under section 7 of the Act with regard to the mechanically propelled vessel, or gives a declaration with which the owner or master of the mechanically propelled vessel is dissatisfied, the State Government may, on the application of the owner or master, and the payment by him of fee twice the amount of the fee payable for the previous survey, direct two other surveyors to survey the mechanically propelled vessel.

2.21.3 The surveyors so directed shall forthwith survey the mechanically propelled vessel, and may, after the survey, either refuse to give a declaration or give such declaration as, under the circumstances, seems to them proper.

2.21.4 Any declaration given, or any refusal to give a declaration under sub-section 17(2) of the Act shall be final.

2.21.5 When a survey is made by two surveyors under either section 16 or section 17 of the Act each of the surveyors shall perform the prescribed portion of the duties assigned to a surveyor by the Government.

**CHAPTER -III****REGISTRATION OF INLAND MECHANICALLY PROPELLED VESSELS****3.1 Application:-**

- 3.1.1 Every certificate of registry and every certificate of survey issued in respect of a mechanically propelled vessel under the Merchant Shipping Act, 1958, shall be valid and effective as a certificate of registration or certificate of survey, as the case may be, issued under the Act and the relevant provisions of the Act shall apply in relation to such vessel as they apply to an inland mechanically propelled vessel registered under these rules and the Act. **Application**
- 3.1.2 An inland vessel required to be registered by the Act may be detained until the Master of the vessel, if so required, produces a certificate of registry in respect of the vessel.

**3.2 Registering Authority:-**

- 3.2.1 No person shall be appointed as Registering Authority unless he meets the qualifications and experience enumerated in any one of the following: **Registering Authorities**
- a) Possesses a degree or equivalent in Marine Engineering and Ministry of Transport First Class certificate of competency issued by Director General of Shipping, Government of India or equivalent certificate recognized by Government of India with 5 years sailing experience at Management Level. **Qualification**
- or**
- b) Master Mariner with 5 years' experience as surveyor with Directorate General of Shipping / Inland Water Transport Department / State Maritime Board.
- 3.2.2 The Registering Authority shall:- **Functions and Duties**
- a) Ensure that all documents as specified in rules 3.5 are received and are in order.
- b) Conduct enquiry after giving a notice to the applicant in forming the date and time of enquiry.

- c) For the purpose of such enquiry the authority shall be competent to:-
- I.** Inspect the vessel or any part thereof or any machinery thereon or any article there in relevant to the purpose of such enquiry
  - II.** Call for any record from the owner or master of the vessel and examine it in so far as such records are relevant for the purpose of such enquiry.
  - III.** Have such assistance as he deems fit for the purpose of such inspection.
- d) Issue / deny certificate of registration and maintain all records related to registration of vessels.
- e) Inspect any vessel under his jurisdiction, or get it inspected by an officer appointed on his behalf at any time and to suspend the registration of the vessel if satisfied that she is not fit to ply in Inland Waters.
- f) Cancel certificate of registration after necessary formalities, if found necessary.
- g) Issue duplicate copy of certificates issued by the authority.
- 3.2.3 Every person appointed as a registering authority shall, for the purposes of any registration made by him, be deemed to be a public servant within the meaning of the Indian Penal Code.

### **3.3 Book of registration:-**

- 3.3.1 At every place of registry, a book shall be kept by the registering authority in the Form 12 in which all the particulars contained in the form of the certificate of registration, shall be duly entered.
- 3.3.2 The book of registration shall be kept in bound volumes with machine numbered pages.
- 3.3.3 Registering authority shall, immediately after registering any inland mechanically propelled vessels or within one month at the furthest, send to the State Government a true and exact copy, together with the number of every certificate which shall be so granted by it.

**Book of  
Registration**



**3.4 Application for registration:-**

An application for registration of an inland mechanically propelled vessel shall be made by the owner or master of the vessel in Form 13 and shall contain such particulars as required therein and shall be accompanied by:-

- a) A statement by the owner that the provisions of the Act and these rules have been complied with;
- b) In the case of a newly built vessel, the builder's certificate and inspection certificate issued by the surveyor along with approved drawing of the vessel, documents relating to purchase of the vessel and document of its ownership. In case of a new vessel under construction the builder's certificate may be submitted forthwith upon issue by the respective organization / authority after the completion of the vessel.
- c) In the case of renovated vessels, builder's certificate and inspection certificate issued by the surveyor along with approved drawing of the vessel and document of its ownership.
- d) A duplicate of the certificate of survey if issued by the authority;
- e) Challan receipt evidencing payment of such fees as decided by the Administration for the registration of the vessel or as prescribed under section 19R (e) of the Act;
- f) Copy of insurance certificate submitted forthwith when the vessel is insured as per Chapter 7 of these rules before plying / trading. (Note: The vessel will be insured after registration is done and insurance company is given the identity (registration) of the vessel and survey certificate copies).

**Application  
for  
Registration****3.5 Fees Payable:-**

- 3.5.1 The fees payable under the Act shall be as by the Administration.
- 3.5.2 Any fees payable under the Act or under these rules shall be paid by remittance into a Government Treasury / Bank or otherwise as notified to the credit of the Government under such head of account as the Government may specify from time to time.
- 3.5.3 No fee paid under the Act or these rules shall be refundable.

**Fees for  
Registration**

**3.6 Places of Registration:**

- 3.6.1 Every application for registration shall be made on a registering authority of the Place of Registry within the local limits of whose jurisdiction the owner of the inland mechanically propelled vessels ordinarily resides or carries on business.
- 3.6.2 Where the owner applying for a certificate of registration is a company within the meaning of section 3 of the Companies Act, 1956, the application may be made to a registering authority within the local limits of whose jurisdiction the principal office of the company is situated.
- 3.6.3 Notwithstanding anything contained in this section, an inland mechanically propelled vessel may be registered by a registering authority in the State, although the owner does not ordinarily reside or carry on business in the State or, if a company, the principal place of business of the company is not situated in the State, provided that the Government to the State in which the owner ordinarily resides or carries on business, or in the case of a company the Government of the State where the principal places of business of the company is situated has accorded its previous approval thereto and such approval accompanies Application of Registration in addition to documents stated in section 3.4.

**Places of  
Registration****3.7 Procedure for Registration:-**

- 3.7.1 The owner of an inland vessel wishing to have it registered at a place of registry in the State shall make an application for registration and submit to the concerned Registering Authority:-
- a) A declaration of ownership – in the prescribed Form 14
  - b) A certificate signed by the builder (builder's certificate) of the vessel containing a true account of the proper dimensions / particulars and of the tonnage of the vessel as estimated by him and the time, when and the place where the vessel was built, (for new vessel).
  - c) The instrument of sale under which the property of the vessel was transferred to the applicant who requires it to be registered in his name, (for second hand vessel).

**Procedure  
for  
Registration**

- d) To give a minimum of 14 days' notice to the Registering Authority of the name proposed for the vessel. The Registering Authority on receipt of the application for registration of the vessel shall approve the name after ensuring from the records that there is no other vessel in the same name and shall allot an official number for the vessel.

3.7.2 On being satisfied that the inland vessel, on the strength of the evidence placed before hi, is entitled to be registered at the place of registry, the Registering Authority shall give a notice to the applicant in format as prescribed in Form 15, informing him of the time and date of the enquiry in respect of the vessel.

For the purpose of enquiry under these rules, it shall be competent for such authority:-

- a) To inspect the vessel or any part thereof or any machinery therein or any article therein relevant to the purpose of such enquiry;
- b) To call for any record from the owner or master of the vessel and examine it in so far as such records are relevant for the purpose of such enquiry and
- c) To have such assistance as it deems fit for the purpose of such inspection.

3.7.3 The owner, the master and every member of the crew of the vessel shall afford to such authority al reasonable facilities for the enquiry and furnish such information as the authority requires for the purpose of such inquiry.

3.7.4 After the formalities enumerated above have been gone through, the Registering Authority issues a carving and marking note in the format as prescribed in Form 16. This note is to be returned to the Registering Authority after carving and marking have been duly carried out on the vessel in the prescribed manner and certificate by a Surveyor. The carving and marking is to be done as detailed in 3.10 below.

3.7.5 On completion of the preliminaries to registry as described in the preceding paragraphs, the Registering Authority enters in the Book of Registration the particulars of the inland vessel such as:

- a) Name of the vessel and the place of registry.
- b) Details contained in the Certificate of Survey.
- c) Particulars respecting her origin as revealed in the declaration of ownership
- d) The name and description of her registered owner and, if there are more owners than one, the number of shares owned by each of them;

### **3.8 Grant of certificate of registration:-**

- 3.8.1. If, in respect of any inland mechanically propelled vessel, the registering authority, after making such inquiry as in sub-rule 3.7 of these rules, thinks fit, is satisfied that the provision of the Act or of any rules made here under have been complied with, it shall grant to the applicant thereof a certificate of registration retaining the Surveyor's certificate, builders certificate, instrument of sale by which the ship was sold, and the declaration of ownership. The certificate may also be in electronic form like smart card, in place of conventional paper certificate.
- 3.8.2 In special circumstances and for reason to be recorded in writing the registering authority may grant a temporary pass to an inland vessel to enable it to ply during the period of the preparation of certificate or registration. The pass shall be valid for the time and within the limit there in mentioned. The said pass shall be valid for 30 days and shall have the same effect as a certificate of registration subject to the conditions laid down in the pass.
- 3.8.3 It shall be the duty of the owner or master of the inland vessel to produce Certificate of Registration on demand by authority engaged in the enforcement of Act and rules.
- 3.8.4 A registered authority may refuse to register an inland mechanically propelled vessel, if she is found to be mechanically defective, or if the applicant fails to furnish satisfactory evidence in support of any of the statements made in his this application.

### **Grant of Certificate of Registration**

3.8.5 Provided that where the registering authority refuses to register any inland mechanically propelled vessel, it shall furnish to the applicant a statement in writing containing the reasons for such refusal.

### **3.9 Duplicate of the certificate:-**

3.9.1 The authority which issued the certificate of registration shall issue a duplicate of the certificate of registration to replace a certificate lost, destroyed or mutilated.

3.9.2 Provided that no such duplicate certificate shall be issued unless:-

- a) In the case of a certificate lost, it is proved to the satisfaction of the Registering Authority that all measures possible for tracing out the certificate have been exhausted;
- b) In case of a certificate destroyed, such authority is satisfied after due enquiry that the certificate has actually been destroyed; and
- c) In case of mutilated certificate, the owner delivers up such certificate to such authority.

3.9.3 Every duplicate of the certificate shall, on the face of it, be stamped with the word duplicate in red ink.

3.9.4 In the case of a certificate lost if, subsequent to the issue of a duplicate certificate, the original certificate is found, the later shall be delivered up to the issuing authority that shall cancel the certificate and record the same.

### **3.10 Marking of Inland mechanically propelled vessels:-**

3.10.1 Where an inland mechanically propelled vessel has been registered under this Chapter, the registering authority shall assign to the vessel, to be displayed thereon conspicuously registration mark comprising of registration number, port of registry and name of Vessel as described in following sub sections of this section.

3.10.2 Every registered vessel shall bear the following identification marks on its hull:-

**Duplicate  
Certificate of  
Registration**

**Markings of  
Vessels**

- A. Name of vessel:-Name shall be inscribed on each bow and stern of the mechanically propelled vessel. In the case of dumb barges / vessels name and official number on each bow;
- B. Registration No and year of registration on the main super structure and / or engine room bulk head / main beam in mechanically propelled vessels.
- C. Place / Port of registry on the stern / transom.

3.10.3 The identification mark shall be inscribed not less than 200 mm x 150 mm (height x breadth) with each letter 25 mm wide and shall be curved / marked / welded in light color on a dark background or in a dark color on a light background.

3.10.4 Inland Vessels registration marks and the number denoting its gross tonnage shall be curved / marked on its main beam or any permanent bulkhead at a prominent place.

3.10.5 Additionally, every vessel shall be painted and displayed on a fixed board, exhibited on the upper deck, the following information;

- a) Gross tonnage;
- b) Maximum permissible number of passengers;
- c) Name of the owner;
- d) Date of last survey,
- e) Loaded draft and dead weight ton in case of cargo vessels.

3.10.6 Inland vessels load line shall be curved / marked / welded Plimsoll mark on port and starboard side where practicable on vessels above 20 meter in length and in case of small vessels / crafts a load line mark shall be curved / marked / welded 300 mm long and 25 mm wide and shall coincide with maximum draught level of the inland vessel in fair weather conditions.

3.10.7 Scale of draught marks shall be curved / marked / welded in meters and millimeters / decimeters, forward and aft of Inland vessels on both the port and the starboard side and on mid ship in particular on cargo vessels above 20 meters in length with Plimsoll mark.

**3.11 Prohibition against transfer of certificate of registration:-**

- 3.11.1. A certificate of registration granted in respect of any inland mechanically propelled vessel shall be used only for the lawful navigation of that vessel.
- 3.11.2 A certificate of registration in respect of an inland mechanically propelled vessel issued by a registering authority in the State shall be valid for the State only, but where any such vessel plied in inland waters of any other State, nothing in this section shall be deemed to require the owner or master of the vessel to obtain a fresh certificate of registration in relation to the State or States in which the vessel is not so registered.
- 3.11.3 When an inland mechanically propelled vessel registered in another State has been kept in the State for a period exceeding thirty six months, the owner or master of the vessel shall make an application under section 19K of the Act to the registering authority, within whose jurisdiction the vessel then is, for the transfer of registry from the registering authority of the place where the vessel is registered.

**Prohibition  
against  
transfer of  
certificate of  
registration**

**3.12 Registration of alterations:-**

- 3.12.1 No alteration to a vessel shall be made without obtaining sanction from the Registering Authority.
- 3.12.2 Subsequent to obtaining the sanction of the registering authority in sub rule 3.12.1, when an inland mechanically propelled vessels is so altered as not to correspond with the particulars relating to her or the description entered in the certificate of registration, then the owner of the vessel shall, within 30 days, make a report of such alteration to the registering authority of the place where the vessel is registered.
- 3.12.3 The report under sub-section 3.12.2 shall be made in Form 17 and shall contain such particulars with respect to the alteration as may be prescribed and shall be accompanied by the certificate of registration in force in respect of the vessel at the time of the report.
- 3.12.4 The registering authority, on receipt of the report under sub-rule 3.12.1 and on payment of the prescribed fee as per by the Administration, shall either cause the alternation to be registered or direct that the vessel be registered a new.

**Registration  
of  
alterations**

3.12.5 The registering authority in deciding whether alteration will be recorded or whether the inland vessel should be registered a new shall be guided by the following considerations:-

- a) Whenever any material alteration is made in the hull affecting the length or breadth or depth of the inland vessel or wherever there is alteration in the means of propulsion including addition or removal of an auxiliary engine the vessel shall require new registration.
- b) Where the alteration consists merely of a change in the dimensions of close in space, the addition or removal of poop or deckhouse etc. or an allowance or disallowance or crew space of other similar changes or an alteration from motor or steam crew to another motor or steam crew or reverse. The registering authority may allow such alteration to be recorded provided the stability of the vessel is not endangered there by.

3.12.6 Provided that where the registering authority directs that the vessel be registered a new, it shall either grant a provisional certificate describing the vessel as altered or provisionally endorse the particulars of the alteration on the existing certificates.

3.12.7 Any provisional certificate granted or endorsement made under the provisions of this section shall be valid for a period of one month from the date thereof, within which period the owner shall cause all necessary steps to be taken to have the vessel registered a new.

### **3.13 Transfer of registry:-**

3.13.1 The registry of an inland mechanically propelled vessel may be transferred from one place in a State to another place in another State on the application in the prescribed format as in Form 18 by the owner or master of the vessel to the registering authority of the State in which the vessel is kept.

3.13.2 On receipt of such application, the registering authority shall transmit notice thereof to the registering authority of the place where the vessel is registered, who shall communicate no objection or otherwise to such transfer within a fortnight or earlier.

**Transfer of  
registry**



- 3.13.3 The certificates of registration in respect of the vessel shall be delivered up to the registering authority of the intended place of registry along with the application.
- 3.13.4 On receipt of the application under sub-rule 3.13.1 and fee which is decide by the Administration, the registering authority of the intended place of registry shall enter in its register book, all the particulars relating to the vessel and grant a fresh certificate of registration in respect of the vessel and hence forth such vessel shall be considered as registered at the new place of registry.
- 3.13.5 A State Government may make rules under section 19R of the Act requiring the owner or master of an inland mechanically propelled vessel not registered within the State which is brought into or is, for the time being in the State, to furnish to a prescribed authority in the State such information with respect to the inland mechanically propelled vessel and its registration as may be prescribed.

### **3.14 Transfer of vessel:-**

- 3.14.1 If a vessel is transferred to any person, whether resident within the State or not, the transferor and the transferee shall make joint report of the transfer to the registering authority within whose jurisdiction the transferee resides or carries on business within thirty days of such transfer along with a challan or deposit receipt evidencing payment of fees decide by the Administration, for such transfer.
- 3.14.2 Provided that no transfer shall be made to any person resident in another State or in any country outside India, without the previous approval of the Government.
- 3.14.3 The certificate of registration in respect of the vessel shall also be surrendered along with the report referred to in sub-rule 3.14.1 in order that the particulars of the transfer of the ownership may be entered thereon.

**Transfer of  
vessel**

**3.15 Change of residence or place of business:-**

3.15.1 If the owner of an inland mechanically propelled vessel ceases to reside or carry on business at the address recorded in the certificate of registration of the vessel, he shall, within thirty days of the change of address, intimate his new address to the registering authority by which the certificate of registration was granted, or if the new address is within the jurisdiction of another registering authority, to that registering authority, and shall at the same time forward the certificate of registration to the registering authority in order that the new address may be entered thereon.

**Change of  
residence or  
place of  
business**

3.15.2 Where a registering authority other than the original registering authority makes any such entry, it shall communicate the new address to the original registering authority.

**3.16 Prohibition against transfer of ownership of registered vessel:-**

3.16.1 An inland mechanically propelled vessels registered under this Act in one State shall not be transferred to a person resident in another State in India or in any country outside India, without the previous approval of the Government of the State in which the vessel is registered;

**Prohibition  
against  
transfer of  
ownership of  
registered  
vessel**

3.16.2 Provided that where an inland mechanically propelled vessel is registered or deemed to be registered under the Merchant Shipping Act, 1958 this sub-section shall have effect as if for the words – the Government of the State in which the vessel is registered the words – the Central Government had been substituted.

3.16.3 Subject to the provisions of sub-rule 3.16.1, the owner of an inland mechanically propelled vessels registered under the Act and the transferee there of shall, within thirty days of the transfer of ownership of the said vessel to the transferee, jointly make a report of the transfer to the registering authority within the local limits of whose jurisdiction the transferee resides or carries on business and shall also forward the certificate of registration to that registering authority, together with the prescribed fee, in order that particulars of the transfer of ownership may be entered thereon.

**3.17 Suspension of certificate of registration:-**

- 3.17.1 A registering authority may suspend, for such period and subject to such conditions as it thinks fit, the certificate or registration of an inland mechanically propelled vessels, if it has reason to believe that after the granting of the certificate the vessel has become unfit to ply in inland waters.
- 3.17.2 Where the registration of an inland mechanically propelled vessel is suspended under sub-rule 3.17.1, the registering authority ordering the suspension shall, if it is not the original registering authority, inform that other authority of the fact of such suspension.
- 3.17.3 The registering authority suspending the certificate may require the owner or master of the vessel to deliver up the certificate so suspended to itself or, if it is not the original registering authority, to that other authority.
- 3.17.4 A certificate of registration surrendered under this section shall be returned to the owner when the order suspending the certificate has been rescinded or has been ceased to operate.

**Suspension  
of certificate  
of  
registration**

**3.18 Cancellation of registration:-**

- 3.18.1 If an inland mechanically propelled vessel has been destroyed or has been rendered permanently unfit for service, the owner of the vessel shall, with the least practicable delay, report the fact to the registering authority of the place where the vessel is registered and shall also forward to the authority, along with the report, the certificate of registration of the vessel and there upon the registering authority shall have the certificate of registration cancelled.
- 3.18.2 The registering authority or any officer authorized by the State Government in this behalf may go on board, detain, or inspect any vessel at any hour for the purpose of satisfying himself that the provisions of the Act, are being complied with. It shall be the duty and responsibility of the owner or master of the inland vessel to give all reasonable assistance to the inspecting officer in carrying out the inspection and to comply with any lawful direction that he may give.

**Cancellation  
of  
registration**

- 3.18.3 In case any inland vessel is detained a report of the circumstances in which the detention is ordered shall be sent to the registering authority and the Administration within forty eight hours.
- 3.18.4 The registering authority at any time, if satisfied that the vessel is in a condition not fit to ply in the Inland water, suspend the registration of the vessel and require the owner thereof to surrender forth with certificates of survey and registration in respect of that vessel.
- 3.18.5 No certificate shall be suspended under section 19 N of the Act without giving owner a reasonable opportunity of being heard in respect of the grounds on which the suspension of the certificate is proposed.

### **3.19 Appeals:-**

3.19.1 Any person aggrieved by an order:-

- a) Refusing to register any inland mechanically propelled vessel under section 19F of the Act; or
- b) Suspending a certificate of registration under section 19N of the Act;
- c) Cancelling a certificate of registration under sub-rule (2) of section 19O of the Act, may within thirty days of the date on which he receives notice of such order, appeal against it to the State Government who in turn may appoint an appellant authority other than registering authority.

### **Appeals**

3.19.2 Every such appeal shall be in Form 19 and shall contain the particulars required there in.

3.19.3 The appeal shall be accompanied by the following, namely:-

- a) Two copies of order appealed against; (of which at least one shall be the original or an attested copy)
- b) Challan receipt evidencing payment of the fee for the appeal as decide by the Administration;
- c) Such other records as are necessary for the disposal of the appeal

3.19.4 The notice of appeal referred to in sub-rule (2) of section 19 P of the Act shall be in Form 19 and shall contain the particulars specified therein;

3.19.5 The notice shall be communicated to the registering authority through post or through a messenger or by any other method which has the effect of communicating the notice.

**3.20 Reciprocity:-**

3.20.1 Where the Central Government is satisfied that by the law or practice of any country outside India, inland mechanically propelled vessels having a certificate of registration in force under this Act.

**Reciprocity**

- (a) Obtain by reason of such registration any special exemption in that country while plying in the inland waters thereof, or
- (b) Are required as a condition of plying in the inland waters of that country to comply with any special requirement, whether by way of registration a new or payment of a fee or otherwise.

3.20.2 The Central Government, may by notification in the Official Gazette, for the purpose of reciprocity, direct that the same exemption or requirement, or an exemption or a requirement as similar thereto as may be granted to, or imposed upon, inland mechanically propelled vessels registered in that country while plying in the inland waters of the territories to which this Act extends.

**3.21 Mortgage of mechanically propelled inland vessel or share:-**

3.21.1 Mortgage of inland mechanically propelled vessel or share:-

- 1) A registered inland mechanically propelled vessel or a share therein may be made a security for a loan or other valuable consideration, and the instrument creating the security (called mortgage) shall be in the prescribed form or as near thereto as circumstances permit, and on the production of such instrument the Registering Authority of the inland mechanically propelled vessels port of registry shall record it in the Book of Registration and endorse the same in the Certificate of Registry.
- 2) Mortgages shall be recorded by the Registering Authority in the order in time in which they are produced to him for that purpose, and the Registering Authority shall, by memorandum under his hand, notify on each mortgage that it has been recorded by him stating the day and hour of that record.

**Mortgage**

3.21.2 Entry of discharge or mortgage- Where a registered mortgage is discharged, the Registering Authority shall, on the production of the mortgage deed with a receipt for the mortgage money endorsed thereon, duly signed and attested, make an entry in the Book of Registration to the effect that the mortgage has been discharged, and on

that entry being made the estate, if any, which passed to the mortgagee shall vest in the person in whom (having regard to intervening acts and circumstances, if any) it would have vested, if the mortgage had not been made.

3.21.3 Priority of mortgage- If there are more mortgages than one recorded in respect of the same inland mechanically propelled vessel or share, the mortgagees shall, notwithstanding any express, implore or constructive notice, have priority according to the date on which each mortgage is recorded in the Book of Registration and not according to the date of each mortgage itself.

3.21.4 Mortgagee not deemed to be owner- Except in so far as may be necessary for making a mortgaged inland mechanically propelled vessel or share available as a security for the mortgage debt, the mortgagee shall not, by reason of his mortgage, be deemed to be the owner of the inland mechanically propelled vessel or share, nor shall the mortgagor be deemed to have ceased to be owner thereof.

3.21.5 Rights of Mortgagee:-

- 1) Where there is only one registered mortgagee of an inland mechanically propelled vessel or share, he shall be entitled to recover the amount due under the mortgage by selling the mortgaged inland mechanically propelled vessel or share without approaching the High Court. Provided that nothing contained in this sub-section shall prevent the mortgagee from recovering the amount so due in the High Court as provided in sub-rules (2) below.
- 2) Where there are two or more registered mortgagees of an inland mechanically propelled vessel or share they shall be entitled to recover the amount due under the mortgage in the High Court, and when passing a decree or thereafter the High Court may direct that the mortgaged inland mechanically propelled vessel or share be sold in execution of the decree.
- 3) Every registered mortgagee of an inland mechanically propelled vessel or share who intends to recover the amount due under the mortgage by selling the mortgaged inland mechanically propelled vessel or share under sub-rules (1) shall give, an advance notice of fifteen days relating to such sale to the Registering Authority of the inland mechanically propelled vessels port of registry.

- 4) The notice under sub-rules (3) shall be accompanied with the proof of payment of all wages and other amounts due to seamen in connection with their employment on that vessel.
- 3.21.6 Mortgage not affected by insolvency:- A registered mortgage of an inland mechanically propelled vessel or share shall not be affected by any act of insolvency committed by the mortgagor after the date of the record of such mortgage, notwithstanding that the mortgagor, at the commencement of his insolvency, had the inland mechanically propelled vessel or share in his possession, order or disposition, or was the reputed owner thereof, and the mortgage shall be preferred to any right, claim or interest therein of the other creditors of the insolvent or any trustee or assignee on their behalf.
- 3.21.7 Transfer of mortgages:-
- 1) A registered mortgage of an inland mechanically propelled vessel or share may be transferred to any person and the instrument effecting the transfer shall be in the prescribed form or as near thereto as circumstances permit, and on the production of such instrument, the Registering Authority shall record it by entering in the Book of Registration the name of the transferee as mortgagee of the inland mechanically propelled vessel or share and shall, by memorandum under his hand, notify on the instrument of transfer that it has been recorded by him stating the day and hour of the record.
  - 2) The person to whom any such mortgage has been transferred shall enjoy the same right or preference as was enjoyed by the transferor.
- 3.21.8 Instrument creating a mortgage of a vessel or a share therein shall be in Form 20.
- 3.21.9 Instrument creating a transfer of a mortgage or a share therein shall be in Form 21.
- 3.21.10 Instrument creating the discharge of mortgage shall be in Form 22.

**CHAPTER - IV****MASTERS INCLUDING SERANGS AND ENGINEERS INCLUDING ENGINE –  
DRIVERS OF INLAND MECHANICALLY PROPELLED VESSELS****4.1 Minimum Crew / Manning**

- 4.1.1 Every inland vessel registered under these rules shall have minimum **Minimum Manning** manning on-board to ensure safety of the vessel, passengers / cargo and environment. The minimum manning applicable to each vessel shall be prescribed by the Surveyor in its Certificate of Survey and shall take in to account the type and size of the vessel, its operating area, engine capacity and any other factor considered necessary.
- 4.1.2 For the purpose of this chapter, the vessels may be classified into categories as follows:-
- a) **Category A:-** All Inland Vessels constructed for operating / operating in Zone 1
- b) **Category B:-** All Inland Vessels other than Category A.
- 4.1.3 (a) Every inland vessel shall have on board minimum following crew when in operation:-

|                   | <b>Vessels &lt; 226 BHP</b>  | <b>226 BHP &lt; Vessels &lt; 565 BHP</b>  | <b>Vessels &gt; 565 BHP</b>   |
|-------------------|--|---|---|
| <b>Category A</b> | a) One master with Master Class 3/ Serang certificate<br>b) One engineer with Engine Driver Class 2 certificate<br>c) Three General Purpose Ratings for attending duties of deck hands, engine hands & cooking | a) One master with Master Class 2 certificate<br>b) One engineer with Engine Driver Class 1 certificate<br>c) Three General Purpose Ratings for attending duties for deck hands, engine hands & cooking | a) One master with Master Class 1 certificate.<br>b) One engineer with Engineer certificate / License Driver Certificate up to 960 BHP<br>c) Four General Purpose Rating for attending duties of deck hands, engine hands & cooking |



|                   |  |  |  |
|-------------------|--|--|--|
| <b>Category B</b> | a) One master with Master Class 3 / Serang certificate<br>b) One engineer with Engine Driver Class 2 certificate<br>c) Two General Purpose Rating for attending duties of deck hands, engine hands & cooking | a) One master with Master Class 2 certificate.<br>b) One engineer with Engine Driver Class 1 certificate.<br>c) Two General Purpose Ratings for attending duties of deck hands, engine hands & cooking | a) One master with Master Class 1 certificate<br>b) One engineer with Engineer certificate / License Driver Certificate up to 960 BHP.<br>c) Three General Purpose Rating for attending duties of deck hands, engine hands & cooking |
|-------------------|--|--|--|

4.1.3 (b) Every dumb craft of less than 15 m length shall be manned by minimum one General Purpose Rating and every dumb craft of 15 m or more in length shall be manned by minimum two General Purpose Ratings.

4.1.4 A mechanically propelled vessel less than 565 BHP shall be deemed to have complied with the requirements of master and engineer if she has as her master and engineer a person possessing both certificates and appropriate class.

4.1.5 The Surveyor may specify minimum manning of higher order than prescribed in sub rule 4.1.3 above if in his opinion other factors like nature of trade of the vessel, length of voyage necessitates such additional manning in the interest of Safety of life, property, environment and the inland waterways.

## **4.2 Appointment of Examiners & Examination Centers:-**

4.2.1 The Chief Examiner appointed by the Administration shall be responsible for the Examination and issue of Certificate of Competency to the persons desirous of obtaining such Certificates of Competency.

**Appointment  
of Examiners  
&  
Examination  
Centers**

4.2.2 The Chief Examiner shall be assisted by suitable number of Examiners appointed by the administration.

4.2.3 The places as decide by the Administration shall be the Examination Centers in the State for the purpose of this Chapter. The State Government may by notification in the Official Gazette bring about a change in the list of Examination Centers.

a) Each Examination center shall announce its Examination schedule for various Grades based on the assessment of local needs, ensuring adequate frequency of the examination so that the candidates do not have to wait for more than 6 months to appear in the examination from the date of application.

4.2.4 No. person shall be appointed as Chief Examiner unless he fulfils one of the following requirements of qualification and experience:

a) Possesses Extra Master Certificate of Competency issued by Director General of Shipping with minimum 5 years ship board experience as Certified Officer out of which minimum 3 years at Management Level.

**Qualification  
of Chief  
Examiner**

4.2.5 A Chief Examiner shall discharge the following duties;

a) Supervise overall conduct of examinations for various grades of Certificate of competency in the State.

b) Supervise overall issuance of various grades of certificates of competency.

c) Fix the frequency and schedule of examination for various grades of certificate of competency in State.

d) Frame guidelines for approval of Training Institutes offering Inland Vessel courses in the State.

e) Inspect and approve Training Institutes in the State desirous of offering Inland Vessel course in the State.

**Duties of  
Chief  
Examiner**

4.2.6 No person shall be appointed as an Examiner unless he fulfills the following requirements of qualification and experience:-

a) Possesses a Ministry of Transport Master (FG) or M. E. O. Class 1 Certificate of Competency issued by Director General of Shipping with minimum 5 years shipboard experience as Certificated Officer and 1 year command of FG Ship or 1 year as Chief Engineer on FG ship

**Qualification  
of Examiner**

- b) Chief Surveyor with the approval of Administration may appoint MEO Class – II working with Administration as Examiner.

4.2.7 An Examiner shall discharge the following duties namely:-

- (a) Supervise and conduct examinations for various grades of Certificate of Competency at an examination center.
- (b) Issuance of various grades of certificates of competency.
- (c) Assist Chief Examiner in discharge of his duties and responsibilities

#### **4.3 Issuance of Certificate of Competency:-**

4.3.1 No candidate shall be granted a Certificate of Competency under these rules without passing the relevant examination of competency specified hereunder. The examination for each grade of Certificate of Competency shall comprise of oral examination. The syllabus for each grade of examination shall be as contained in Schedule - I.

**Issuance of  
Certificate  
of  
Competency**

4.3.2 The above clause does not apply to issuance of Certificate of Service issued under these rules.

4.3.3 A Certificate of competency may be issued for the following grades, namely:

i) Deck Department:-

- a) Master Class 1 Certificate
- b) Master Class 2 / License Master Certificate
- c) Master Class 3 / Serang Certificate

ii) Engine Department:-

- a) Inland Engineer Certificate
- b) Engine Driver Class 1 / License Driver Certificate
- c) Engine Driver Class 2 Certificate

#### **4.4 Master and Deck Department:-**

4.4.1 Examination for the grant of Certificate of Competency as inland vessel Master Class 1, Master Class 2 and Master Class 3 / Serang shall be held by the examiner at the places of examination in the State on such dates as may be published by the examination center.

**Master and  
Deck  
Department**

4.4.2 Every application for examination shall be filled and submitted in Form 23 appended to these rules together with copies of documents stated

therein. The application filled shall be received at the examination center as per the schedule announced before the date fixed for examination together with the supporting documents required for as certain ineligibility of the candidate detailed in sub-rules 4.4.3 to 4.4.6 herein.

**4.4.3 Minimum requirements for certification of Master Class 1 of an inland mechanically propelled vessel: Every candidate for certification as Master Class 1 shall:-**

**Master  
Class - I**

- i) Hold a valid Certificate of Competency as Master Class 2 of an inland mechanically propelled vessel issued under these rules.
- ii) Have served as Master Class 2 in-charge of an inland vessel of not less than 226 BHP for minimum of three years; **or** while possessing a Master Class 2 Certificate have served as Second Serang of an inland vessel for not less than four years; **or** hold Master / Chief Mate / Second Mate (Foreign Going) or Master / Chief Mate Near Coastal Voyage (NCV) / Home Trade granted under the Merchant Shipping Act, 1958 and have served as a Second in Command under a Master of an inland vessel for not less than one year; **or** have served not less than three years on sea-going vessels and three years as Mate (Sukhani) of an inland vessel; **or** have served not less than six years as a Mate (Sukhani) of an inland vessel;
- iii) Have successfully completed Inland Vessel Maneuvering Simulator course at National Inland Navigation Institute, Patna or from any other institute recognized by the State Government.
- iv) Produce a medical certificate as to his physical fitness in Form 24.
- v) Have successfully attended approved Preparatory Course for Master Class 1. The Preparatory Course for Master Class 1 is to be approved by Inland Waterway Authority of India or the State Government. The minimum course duration, contents and structures of the Preparatory Course for Master Class 1 shall be same as followed by National Inland Navigation Institute, Patna and amended by it from time to time.

- vi) Have completed the four basic safety courses for inland vessels approved by IWAI or DGS or State Government namely:-
  - a) Elementary First Air (EFA)
  - b) Proficiency in survival techniques (PST)
  - c) Personal safety and social responsibility (PSSR)
  - d) Fire Prevention and Fire Fighting (FPFF)
  - e) Security Training For Seafarers With Designated Security Duties (STSDSD)

**4.4.4 Minimum requirement for certification of Master Class 2 of an inland mechanically propelled vessel: Every candidate for certification as Master Class 2 shall:**

**Master  
Class - II**

- i. In possession of valid Master Class 3 / Serang Certificate of Competency issued under these rules.
- ii. Have served at least five years on inland vessels or sea-going vessels, the last three years of which must have been as Master Class 3 / Serang in an inland vessel with a Master Class 3 / Serang certificate granted under the Act **or** shall have served at least six years as a lascar / deck hand / General Purpose Rating in an inland vessel of not less than 226 Brake Horse Power (BHP).
- iii. Shall produce a medical certificate as to his physical fitness in Form 24.
- iv. Have successfully attended approved Preparatory Court for Master Class 2. The Preparatory Course for Serang is to be approved by IWAI or State Government. The minimum course duration, contents and structure of the Preparatory Course for Master Class 2 shall be same as followed by NINI Patna and amended by it from time to time.
- v. Have completed the four basic safety courses for inland vessels approved by IWAI or DGS or State Government namely:-
  - a) Elementary First Air (EFA)
  - b) Proficiency in survival techniques (PST)
  - c) Personal safety and social responsibility (PSSR)
  - d) Fire Prevention and Fire Fighting (FPFF)

- e) Security Training For Seafarers With Designated Security Duties (STSDSD)

**4.4.5 Minimum requirements for certification of Master Class 3 / Serang of an inland mechanically propelled vessel:-** Every candidate for certification as Master Class 3 / Serang shall be:-

**Master  
Class - III**

- i) A Citizen of India
- ii) Not less than twenty years of age
- iii) Medically fit and produce a medical certificate as to his physical fitness in Form 24.
- iv) Have successfully attended approved Preparatory Course for Master Class 3 / Serang. The Preparatory Course for Serang is to be approved by IWAI or State Government. The minimum course duration, contents and structure of the Preparatory Course for Master Class 3 / Serang shall be same as followed by NINI Patna and amended by it from time to time.
- v) **Have completed the four basic safety courses for inland vessels approved by IWAI or DGS or State Government namely:**
  - a) Elementary First Aid (EFA)
  - b) Proficiency in survival techniques (PST)
  - c) Personal safety and social responsibility (PSSR)
  - d) Fire Prevention and Fire Fighting (FPFF)
  - e) Security Training For Seafarers With Designated Security Duties (STSDSD)
- vi) **Only for Existing Lascars / Deck Hands (who have started service in inland vessels before these rules)**
  - a) Shall be 8<sup>th</sup> class pass from a board recognized by Central / State
  - b) Be able to read and write Hindi / English and Regional Language of the State.
  - c) Meeting any one of the following minimum service criteria – Four years' service on Inland vessels or sea going vessels having engine not less than 226 BHP **or** Five years on vessels having engine not less than 85 BHP **or** six years on vessel having engine not less than 40 BHP, one

year of which service shall be as helmsman or an Assistant Master (Deck) or Seacunny, or such candidates who have served on the vessels of Defense, Police, P. A. C. or other paramilitary forces for 5 years or more.

- d) Should have performed at least six months service as Lascar / Deck hand on board the vessel plying in ports / Inland Waters of the State.

**vii) For New Entrants Through Rating Route (which includes existing Lascars / Deck Hands / General Purpose Rating who meet these requirements:-**

- a) Passed 10<sup>th</sup> class examination from board recognized by Central / State Government.
- b) Successfully completed General Purpose Rating Course at National Inland Navigation Institute, Patna or similar training establishment approved by the State.
- c) Have minimum three years of services on Inland vessels or sea going vessels out of which one year of the service shall be as helms man or as sea cunny.

**viii) For New Entrants Through Cadet Training Route.**

- a) Such candidate who have passed class 12<sup>th</sup> class examination from board recognized by Central/State Government.
- b) Successfully complete Inland Vessel Cadet Training at National Inland Navigational Institute (NINI), Patna or similar training establishment approved by the State.
- c) Shall have two years of services on Inland vessels or sea going vessels provided the total service has been performed as Inland Vessel cadet apprentice with onboard vessels Structured Training Program verified in record book and approved or conducted by National Inland Navigation Institute or State approved training establishment and should have performed at least six months watch keeping service under qualified Master class 1 / 2 / 3 Serang on board the vessel plying in the port / Inland Vessels of the State.

4.4.6 A candidate who has served as a master, or as an engineer of a vessel of the Coast Guard, Indian Navy or regular Army for a period of 5 years may be granted a certificate of service as a first-class master, second-class master or serang, depending on the size of vessel served and on successful completion of relevant preparatory course including the four basic safety courses from National Inland Navigation Institute, Patna or from any other institute recognized by Transport Department. Such candidates shall be exempted from written examination but will be required to qualify the oral examination.

**Certificate  
of Service**

4.4.7 A certificate of service granted as per sub-rules 4.4.6 shall have the same effect as a certificate of competency granted under these rules. A certificate of Service so issued shall be issued in Form 25.

4.4.8 The Chief Examiner may if he thinks fit grant a license as per format prescribed in Form 26 authorizing a person to act as master of any inland mechanically propelled vessel having engines of 961 BHP or of such less Brake Horse Power as he may deem fit who is in possession of a second-class master's certificate granted as per these rules and has, by virtue of such certificate, acted as master of an inland mechanically propelled vessels having engine of 226 BHP or more brake horse power for a period of not less than five years.

**License to  
act as  
Master**

4.4.9 Any license granted under sub-rule 4.4.8 above shall remain in force only for such time as the person holding the same is in the possession of Master Class 2 Certificate referred to in sub-rule 4.4.8 above. Provided that the State Government may if it thinks fit, suspend, cancel or vary the conditions of any such licenses.

#### **4.5 Engineering Department:-**

4.5.1 Examination for the grant of certificate of competency as Inland Engineer Certificate, Engine Driver Class 1 Certificate, and Engine Driver Class 2 shall be held by the examiner at the places of examination in the State on such dates as may be published by the examination center.

**Engineering  
Department**



4.5.2 Every application for examination shall be filled and submitted in Form 23 appended to these rules together with copies of documents stated therein. The application so filled shall be received at the examination center before the date fixed for examination together with the supporting documents required for ascertaining eligibility of the candidates.

4.5.3 **Minimum requirements for certification of Engineer of an Inland Mechanically Propelled Vessel:-** Every candidate for certification as Inland Vessel Engineer shall be:-

**Engineer of  
Inland  
Vessel**

- i) In possession of Engine Driver Class 1 Competency Service issued under the Inland Vessels Act, 1917 (Central Act 1 of 1917)
- ii) Should have worked for 18 months on a vessel having engines more than 565 BHP for 36 months on a vessel more than 226 BHP while holding Engine Driver Class 1 certificate issued under the Inland Vessel Act, 1917 (Central Act 1 of 1917)
- iii) Shall produce a medical certificate as to his physical fitness in Form 24.
- iv) Shall have successfully attended approved Preparatory Course for Inland Vessel Engineer. The Preparatory Course for Inland Vessel Engineer is to be approved by Inland Waterway Authority of India or State Government. The minimum course duration, contents and structure of the Preparatory Course for Inland Vessel Engineer shall be same as followed by NINI Patna and amended by it from time to time.
- v) Have completed the four basic safety courses for inland vessels approved by IWAI or DGS or State Government namely:
  - a) Elementary First Aid (EFA)
  - b) Proficiency in survival techniques (PST)
  - c) Personal safety and social responsibility (PSSR)
  - d) Fire Prevention and Fire Fighting (FPFF)
  - e) Security Training For Seafarers With Designated Security Duties (STSDSD)

**4.5.4 Minimum requirements for certification of Engine Driver Class 1 of an inland mechanically propelled vessel:-** Every candidate for certification as Engine Driver Class 1 shall:-

**Engine  
Driver Class  
- I**

- i) Be in possession of Engine Driver Class 2 Competency Service issued under the Inland Vessels Act, 1917 (Central Act 1 of 1917)
- ii) Have served for a period not less than one year as Assistant to Engine driver on regular watch on the main engines of a motor vessel or not less than 565 break horse power, while holding an Engine Driver Class 2 Certificate for a motor vessel; **or**  
for a period of not less than 24 months as Assistant to Engine Driver / Oil man with a Second Class Engine Driver's Certificate of motor vessel in charge of a watch on the main engine of a motor vessel of not less than 226 brake horse power; **or**  
for a period of not less than three years in the engine room of a motor vessel of not less than 226 brake horse power of which period not less than one year should have been served as an assistant to driver or oilman whilst holding a Second Class Engine Driver's Certificate for motor vessels; **or**  
For a period of not less than 18 months with an Engine Driver Class 2 certificate for motor vessels as driver in-charge of the engine of a motor vessel up to 226 BHP.
- iii) Produce a medical certificate as to his physical fitness in Form 24
- iv) Have successfully attended approved Preparatory Course for Engine Drive Class 1. The Preparatory Course for Engine Driver Class is to be approved by Inland Waterway Authority of India or State Government. The minimum course duration, contents and structure of the Preparatory Course for Engine Driver Class 1 shall be same as followed by NINI Patna and amended by it from time to time.
- v) Have competed the four basic safety courses for inland vessels approved by IWAI or DGS or State Government namely:-
  - a) Elementary First Aid (EFA)
  - b) Proficiency in survival techniques (PST)
  - c) Personal safety and social responsibility (PSSR)

- d) Fire Prevention and Fire Fighting (FPFF)
- e) Security Training For Seafarers With Designated Security Duties (STSDSD)

**4.5.5 Minimum requirements for certification of Engine Driver Class 2 of an inland mechanically propelled vessel:-** Every candidate for certification as Engine Driver Class 2 shall be:-

**Engine  
Driver Class  
- II**

- i) A Citizen of India.
- ii) Not less than twenty years of age.
- iii) Shall have successfully undergone approved Induction Training for Rating (Engine) / General Purpose Rating. The duration and curriculum of the Induction Training shall be same as adopted by NINI.

Such candidate should have served for a period of not less than four years in the engine room of a motor vessel of not less than 226 brake horse power, of which period not less than one year must have been served as Assistant Driver **or**

Total of four years' service as GP rating or rating (engine) of which at least six months shall be on Inland vessel; **or**

For period of not less than five years in the engine room of motor vessel having engines of not less than 85 break horse power, or six years in the engine – room of a vessel having engines of not less than 40 brake horse power of which period not less than one year should have been as assistant driver or oilman; **or**

Such candidate who has passed Class 10 / Matric Examination from recognized school board must have three years of service at or on Inland Waters, one year of which service must be as an Oilman or as an Assistant Driver and should have performed at least six months service on board the vessel plying in the Port / Inland Rivers of the State/Candidate is appearing for examination of 2<sup>nd</sup> Class Engine Driver.

- iv) Shall produce a medical certificate as to his physical fitness in Form 24.
- v) Shall have successfully attended approved Preparatory Course for Engine Driver Class 2. The Preparatory Course for Engine Driver Class 2 is to be approved by Inland Waterway Authority of India or State Government. The minimum course duration, contents and structure of the Preparatory Course for Engine Driver Class 2 shall be same as followed by National Inland Navigation Institute Patna and amended by it from time to time.
- vi) Have completed the four basic safety courses for inland vessels approved by Inland Waterway Authority of India or Director General of Shipping or State Government namely:-
  - a) Elementary First Aid (EFA)
  - b) Proficiency in survival techniques (PST)
  - c) Personal safety and social responsibility (PSSR)
  - d) Fire Prevention and Fire Fighting (FPFF)
  - e) Security Training For Seafarers With Designated Security Duties (STSDSD)

4.5.6 A candidate who has served as an engineer of a vessel of the Coast Guard, Indian Navy or regular Army for a period of 5 years may be granted a Certificate of Service as Engine Drivers and Engineers or Inland Vessels, depending on the size of vessel served and on successful completion of relevant preparatory course including the four basic safety courses from National Inland Navigation Institute (NINI), Patna or from any other institute recognized by State Government.

**Certificate  
of Service**

4.5.7 A certificate of service granted as per sub-rule 4.5.6 shall have the same effect as a certificate of competency granted under these rules. A certificate of Service so issued shall be issued in Form 25.

4.5.8 The Chief Examiner may if he thinks fit grant a license as per format prescribed in Form 26 authorizing a person to act as engineer of any inland mechanically propelled vessels having engines of 960 BHP or of such less nominal horse power as he may deem fit who is in possession

**License to  
act as  
Engineer**

of an Engine Driver Class 1 Certificate granted under the Merchant Shipping Act, 1958, and has, by virtue of such certificate, served as an engine driver of an inland mechanically propelled vessels having engines of not less than 395 BHP seventy nominal horse-power for five years, for not less than two and a half years of which period he has been the engine-driver of such vessel.

- 4.5.9 Any license granted under sub-rule 4.5.8 above shall remain in force only for such time as the person holding the same is in the possession of Engine Driver Class 1 Certificate referred to in sub-rule 4.5.8 above. Provided that the State Government may if it thinks fit, suspend, cancel or vary the conditions of any such licenses.

**4.5 (a) General Purpose Rating:-**

**Minimum requirements to join as General Purpose Rating of an inland mechanically propelled vessel:-** Every candidate for certification as General Purpose Rating shall be:-

- i) A citizen of India
- ii) Not less than 18 years of age.
- iii) Passed minimum 8<sup>th</sup> class for existing Deck / Engine Hands of Inland Vessel and passed minimum 10<sup>th</sup> for new entrants.
- iv) Produce a medical certificate as to his physical fitness in Form 24.
- v) If new entrant – completed approved induction training for General Purpose Ratings at National Inland Navigation Institute (NINI), Patna or similar training establishment approved by the State.
- vi) Existing Deck / Engine Hand – completed minimum 2 years as assistant Deck / Engine Hand on an Inland Vessel and have obtained a Certificate of Proficiency from a Master Class 1/2/3 for Deck Hand or from Engineer / Engine Driver Class 1/2 for Engine Hand under whom he has completed last six months of training as assistant deck / engine hand. Such existing Deck / Engine Hands will be required to undergo an approved conversion course to General Purpose Rating. The Conversion Course for General Purpose Rating is to be approved by Inland Waterways Authority of India or State Government. The

**General  
Purpose  
Rating**

minimum course duration, contents and structure of the Conversion Course to General Rating Course shall be same as followed by the National Inland Navigation Institute, Patna and amended by it from time to time.

- vii) Have completed the four basic safety courses for inland vessels approved by Inland Waterways Authority of India or Directorate General of Shipping or State Government namely:-
- Elementary First Aid (EFA)
  - Proficiency in survival techniques (PST)
  - Personal safety and social responsibility (PSSR)
  - Fire Prevention and Fire Fighting (FPFF)
  - Security Training For Seafarers With Designated Security Duties (STSDSD)

#### **4.6 Certificate to be made in duplicate:-**

Every certificate of competency or service and every license granted under these rules and / or the Act shall be made in duplicate, and one copy shall be delivered to the person entitled to the certificate, or license and the other shall be kept and recorded with the issuing authority with one set of such record forwarded to Chief Examiner on quarterly basis.

**Certificate  
to be made  
in Duplicate**

#### **4.7 Copy of certificate or licenses to be granted in certain cases:-**

Whenever a master or serang, or an engineer or engine-driver, proves, to the satisfaction of the authority which granted his certificate, or license that he has, without fault on his part, lost or been deprived of it, a copy of the certificate or license to which according to the record kept under rules 4.6, he appears to be entitled shall be granted to him and shall have the same effect as the original.

**Copy of  
Certificates  
& Licenses**

#### **4.8 Area in which certificates of competency or service and licenses shall have effect:-**

- 4.8.1 A certificate of competency or service and license granted under this chapter shall have effect throughout India. Provided further that such certificate or license may be endorsed by the State Government of any other State, or with the general or special sanction of the State Government of such other State, by the authority granting it so as to

**Applicability  
of  
Certificates  
of  
Competency  
or Service  
and Licenses**

have effect in such other State or any part thereof and thereupon shall have effect accordingly.

4.8.2 Provided that the authority granting such certificate or license may, by endorsement thereon, restrict the effect of such certificate or license to any part of such State.

4.8.3 A certificate of competency or service and license granted by Government of any other Indian State under the Inland Vessel Act 1917 shall have same effect and applicability in the Inland Vessels and Inland Waterways of this State subject to compliance of following additional conditions:-

- i) Master and Deck Department: - The certificate holder serves for a minimum period of 6 months on an inland vessel plying in the State under the charge of a Master duly qualified to command an inland vessel plying within the State.
- ii) Engineering Department: - No additional requirements.

#### **4.9 Validity of Certificates of Competency and Licenses:-**

The validity of all competency certificates issued for the first time to the candidates who pass the Masters, serang, Engineers, Engine Drivers or General Purpose Rating's examination shall be for period of five years.

**Validity of  
Certificates  
of  
Competency**

#### **4.10 Revalidation of Certificates of Competency**

4.10.1 In case the holder of Certificate of Competency has served in Inland Vessel for minimum period of 1 year during the last 5 years, he shall apply for renewal to the Examiner at any examination center in Form 27 together with supporting documents and appropriate fees. On processing of his documents the Certificates shall be revalidated for next 5 years till the applicant attains an age of 60 years. After 60 years the certificates shall be revalidated for a period of 2 years at a time up to 65 years of age subject to medical fitness and / or as regulated by the issuing authority.

**Revalidation  
of  
Certificates  
of  
Competency**

4.10.2 In case the holder of Certificate of Competency does not fulfill the requirement of service on Inland Vessels prescribed in sub rule 4.10.1 above, but has served in Inland Vessel for a minimum period of 1 year in last 10 years, he shall be required to undergo the Preparatory Course

for grant of that grade of Certificate of Competency at National Inland Navigation Institute or Institute approved by State Government. On successful completion of the course, he shall apply for renewal to the examiner at any examination center in Form 27 together with supporting documents and appropriate fees. On processing of his documents the Certificate shall be revalidated for next 5 years.

4.10.3 In case a holder of Certificate of Competency does not fulfill the requirements of sub rules 4.10.1 or 4.10.2 his lapsed Certificate of Competency may be revalidated on successful completion of Preparatory Course for applicable grade and accruing 3 months service on inland vessel in lower grade

#### **4.11 Cancellation of Certificate of Competency / License:-**

4.11.1 Any certificate or license granted or any endorsement made therein under this chapter may be suspended or cancelled by the State in any of the following cases:-

- i) If, on any investigation made under the IV Act, the Court reports that the wreck or abandonment of or loss or damage to, any vessel, or loss of life has been caused by the wrongful act or default of the holder of such certificate.
- ii) That the holder of such certificate is incompetent,
- iii) Has been guilty of any gross act of drunkenness, tyranny or other misconduct,
- iv) If the holder of such certificate is proved to have been convicted of any non-bailable offence, or
- v) if the holder of such certificate is proved to have deserted his vessel or has absented himself, without leave and without sufficient reason, from his vessel or from his duty; or
- vi) if, in the case of a person holding a certificate of competency or service as second-class master or serang, or as engine-driver, such person is or has become, in the opinion of the State Government, unfit to act as a second-class master or serang or an engine-driver, as the case may be;

4.11.2 Every person whose certificate is suspended or cancelled under this Chapter shall deliver it up to the Chief Examiner.

4.11.3 State Government or Chief Examiner may revoke any order of



suspension or cancellation which it may have made under this Chapter to grant new certificate, or grant, without examination to any person whose certificate it has so cancelled a new certificate. A certificate so granted shall have the same effect as a certificate of competency granted under this Act after examination.

## CHAPTER – V

### INVESTIGATIONS INTO CASUALITIES

#### 5.1 Report of Causalities to be made to nearest Police Station:-

Wherever:-

- a) Any inland mechanically propelled vessel has been wrecked, abandoned or materially damaged, or
- b) by reason of any causality happening to, or onboard of, any inland mechanically propelled vessel loss of life has ensued, or
- c) any inland mechanically propelled vessel, has caused loss of material damage to, any other vessel,

**Report of  
Causalities**

The master of the mechanically propelled vessel shall forthwith give notice of the wreck, abandonment, damage, causality, or loss to the officer in-charge of the nearest police-station. The officer in-charge of the police station receiving the information shall besides taking steps as warranted by the circumstances shall also forthwith inform the Administration.

The owner / master of the inland vessel shall also notify and report the occurrence to the Registration Authority and the Chief Surveyor / Maritime Directorate / Board / Commission of the State.

#### 5.2 Appointment of Court of investigation:-

- 5.2.1 Preliminary inquiry:- On receiving information about the inland vessel casualty, the Administration shall appoint an appropriate officer with the knowledge of Inland Vessel operations and navigation to conduct a Preliminary inquiry into the accident. The purpose of the preliminary inquiry is to establish the following:-

**Appointment  
of Court of  
Investigation**

- a) The reported incident qualifies to be an inland vessel casualty within the meaning of the Act.
- b) The details of the voyage leading to the casualty
- c) The events that lead to the casualty
- d) The extent to which loss of life or loss of property or damage to environment has occurred due to the shipping casualty.

- e) The causes that led to the casualty including acts of in competency, negligence or misconduct of the person / persons concerned.
- 5.2.2 The preliminary inquiry which is held under sub rule 5.2.1 above is a departmental inquiry and the proceedings of such enquiries are not released to the public.
- 5.2.3 In conducting the preliminary inquiry, the inquiry officer has the following responsibilities:-
- a) To inform the State Government of the details of the shipping causalities occurring within their jurisdiction.
  - b) To go on board the inland vessel and inspect the same including machinery and equipment but not unnecessarily detaining or delaying her from proceeding on any voyage.
  - c) To enter and inspect any premises to facilities the completion of the preliminary inquiry.
  - d) To summon persons he thinks fit to take statement to complete the preliminary inquiry.
  - e) To demand the production of all log books, documents or papers he considers necessary for the inquiry.
  - f) To submit a report to the State Government.
- 5.2.4. Whenever on the basis of the preliminary inquiry, the State Government is satisfied that it is necessary or expedient to have a formal investigation into the facts of any case reported under rule 5.1 of this chapter or otherwise brought to its notice, the State Government may:-
- a) Appoint a special Court and direct the Court to make the investigation at such place as the State Government may fix in this behalf, or
  - b) Direct any principal Court of ordinary criminal jurisdiction or the Court of any District Magistrate to make the investigation.
- 5.2.5 A special Court appointed under clause (a) of sub-rule 5.2.4 shall consist of not less than two and more than four persons of whom one shall be a Magistrate, one shall be a person conversant with maritime affairs or with the navigation of inland mechanically propelled vessels, and the other or others (if any) shall be conversant with either maritime

or mercantile affaires, or with the navigation of inland mechanically propelled vessels.

**5.3 Powers of Court of investigation to inquire into charges of incompetency or misconduct:-**

**Powers of  
Court of  
Investigation**

5.3.1 Any Court making an investigation under rule 5.2 of these rules may inquire into any charge of incompetency or misconduct arising in the course of the investigation against any master, engineer or engine-driver, or any person holding a certificate granted under Chapter III of the Act, as well as into any charge of a wrongful act or default on his part causing any wreck, abandonment, damage, casualty, or loss referred to in rule 5.1 of these rules.

5.3.2 In every case in which any such charge arises against any master, engineer or engine-driver, or any person holding a certificate granted under Chapter III of the Act in the course of any investigation, the Court shall, before the commencement of the inquiry into the charge, cause to be furnished to him a copy of the report or of any statement of the case upon which the investigation has been directed.

**5.4 Powers for State Government to direct investigation to otherwise than of under rule 5.1:-**

**Powers of  
State  
Government  
to Direct  
Investigation**

5.4.1 If the State Government has reasons to believe that there are grounds charging any master, engineer or engine-driver, or any person holding certificate granted under Chapter III of the Act, with incompetency misconduct, otherwise than in the course of an investigation under section of these rules, it may send a statement of the case to the principal Court ordinary criminal jurisdiction, or the Court of the District Magistrate, nearest to the place at which it may be convenient for the parties and to attend, and may direct the court to make an investigation into the charge.

5.4.2 Before commencing an investigation under sub-rule 5.4.1 above, the Court shall cause the person charged to be furnished with a copy of the case sent by the State Government.

**5.5 Person charged to be heard:-**

For the purpose of an investigation under this Chapter into any charges against a master, engineer or engine-driver, or any person holding a certificate granted under Chapter III of the Act, the Court may summon him to appear, and shall give him full opportunity of making a defense, either in the personal or otherwise.

**Persons  
charged to  
be heard**

**5.6 Assessors:-**

5.6.1 When, in the opinion of the Court making an investigation under this Chapter, the investigation involves, or appears likely to involve, any Question as to the cancelling or suspension of the certificate of or engine-driver, or any person holding a certificate granted under Chapter III of the Act, the Court shall appoint as its assessors, for the purposes of the investigation, two persons having experience in the merchant services or in the navigation of inland mechanically propelled vessel.

**Assessors**

5.6.2 In every other investigation the Court may, if it thinks fit, appoint as its assessor, for the purposes of the investigation, any person conversant maritime affairs or the navigation of inland mechanically propelled vessel willing to act as assessor.

5.6.3 Every person appointed as an assess or under this section shall attend the investigation and deliver his opinion in writing to be recorded on proceedings.

**5.7 Powers of Court as to evidence and Rules of proceedings:-**

5.7.1 For the purpose of any investigation under this Chapter, the court making the investigation shall, so far as relates to compelling the attendance and examination of witnesses, and the production of documents and the Rules of the proceedings, have:-

**Powers of  
Court as to  
Evidence  
Regulation**

a) If the court is a special Court – the same powers as are exercisable by the principal Court of ordinary criminal jurisdiction for the place at which the investigation is made; or

- b) If the Court is a principal court of ordinary criminal jurisdiction or the Court of the District Magistrate – the same powers as are exercisable respectively by either Court in the exercise of its criminal jurisdiction.

**5.8 Powers of Court to effect arrest of witnesses by entry and detention of vessels :-**

- 5.8.1 If any court making an investigation under this Chapter issues a warrant of arrest to compel the attendance of any person whose evidence is in its opinion necessary, it may, for the purpose of effecting the arrest, but subject to any general or specific instructions issued by the State Government in this behalf authorize any officer to enter any vessel.
- 5.8.2 An officer so authorized to enter any vessel; may, for the purpose of enforcing the entry, call to his aid any officers of Police or Customs, or any other persons, and may seize and detain the vessel for such time as is reasonably necessary to effect the arrest; and every such officer or other person shall be deemed to be a public servant within the meaning of the Indian Penal Code.
- 5.8.3 No person shall be detained under this section for more than forty-eight hours.

**Powers of  
Court to  
Arrest**

**5.9 Power of Court to commit for trial and to bind over witnesses:-**

Whenever, in the course of an investigation under this Chapter, it appears to the Court making the investigation may that any person has committed, within the territories to which the Act extends, an offence punishable under any law in force in such territories, the Court making the investigation (subject to such rules consistent with the Act as the High Court may, from time to time, make in this behalf):-

- a) Cause such person to be arrested:
- b) Commit him or hold him to bail to take his trial before the proper Court;
- c) Bind over any other person to give evidence at such trial; and
- d) Exercise, for the purposes of this section, all the powers of a Magistrate of the first-class or of a Presidency Magistrate.

**Powers of  
Court to  
Commit  
Trial**

**5.10 Deposition of absent witnesses:-**

5.10.1 Whenever, in the course of a trial referred to in rule 5.9, the evidence of any witness is required in relation to the subject matter, any deposition previously made by him in relation to the same subject-matter before any Court making an investigation under this Chapter shall, if authenticated by the signature of the Magistrate or presiding Judge or such Court, be admissible in evidence on proof:-

- a) That the witness cannot be found within the jurisdiction of the Court before which the trial is held; and
- b) That the deposition was made in the presence of the person accused, and that he had an opportunity of cross-examining the witness.

5.10.2 A certificate signed by such Magistrate or presiding Judge that the deposition was made in the presence of the accused, and that he had an opportunity of cross-examining the witness shall, unless the contrary be proved, be sufficient evidence that it was so made and that the accused had such opportunity.

**Deposition  
of Absent  
Witnesses****5.11 Report by Court to State Government:-**

The Court shall, in the case of every investigation under this Chapter, transmit to the State Government a full report of the conclusions at which it has arrived, together with the evidence recorded and the written opinion of any assessor.

**Report by  
Court to  
State  
Government****5.12 Court to exercise its power independently of the assessor:-**

Notwithstanding the appointment under rule 5.6 of an assessor or assessors by a Court making an investigation under this Chapter, the exercise of all powers conferred on such Court by this chapter and the Act shall rest with the Court along.

**Court to  
Exercise  
Power  
Independent  
of Assessor****5.13 Powers for State Government to direct investigations into causes of explosions on mechanically propelled vessels:-**

5.13.1 Whenever any explosion occurs on board any inland mechanically propelled vessel, the State Government may direct that an investigation into the cause of the explosion be made by such person or persons as it may appoint in this behalf.

**Investigation  
into Causes  
of Explosion**

5.13.2 The person or persons so appointed may, for the purpose of the investigation, enter into and upon the mechanically propelled vessel,

with all necessary workmen and laborers, and remove any portion of the mechanically propelled vessel or of the machinery thereof, and shall report to the State Government what, in his or their opinion, was the cause of the explosion.

- 5.13.3 Every person making an investigation under this section shall be deemed to be a public servant within the meaning of the Indian Penal Code.



**CHAPTER - VI**  
**PROTECTION OF, AND CARRIAGE OF PASSENGERS IN INLAND**  
**MECHANICALLY PROPELLED VESSELS**

**PART – A**  
**CARRIAGE OF PASSENGERS IN INLAND MECHANICALLY**  
**PROPELLED VESSELS**

**Part – A**  
**Carriage of**  
**Passengers**

**6A.1 Right of Refusal to carry certain passengers:-**

**Right of**  
**Refusal to**  
**certain**  
**passengers**

- 6A.1.1 The master or any employee authorized in this behalf by the owner or master of any inland vessel, may refuse to admit any person on the Inland Vessel as a passenger,
- a) If he has not paid his fare; or
  - b) If he is insane; or
  - c) If he is suffering from an infectious or contagious disease; or
  - d) If he is drunk and incapable of taking care of himself; or
  - e) If he is disorderly, or if he is otherwise in such a state or is conducting himself in such a manner, as to cause or likely to cause annoyance to other passengers; or
  - f) when the Inland vessel, or the part thereof to which such persons seeks admission, already contains the maximum number of passengers which may lawfully be carried therein.
- 6A.1.2 The Master of the inland vessel performing voyages / trips for carriage of passengers shall maintain a record of such cases in which right of refusal under section 6A. 1. 1 is exercised by the master of an inland vessel.

**6A. 2 Duties of the Passengers:-**

**Duties of**  
**Passengers**

- 6A.2.1 No passenger shall:-
- a) Travel, or attempt to travel in an inland vessel without having previously paid his fare; or
  - b) Travel, or attempt to travel in accommodation of a higher class than that for which his fare has been paid.

- c) Travel beyond the place to which his fare has been paid without previously paying the additional fare in respect of the additional distance; or
- d) Use, or attempt to use ticket on any day for which such ticket is not available; or
- e) Take, or attempt to take luggage with him without having previously paid the freight, if any; payable in respect thereof.

6A.2.2. Every passenger of an inland vessel shall, when required by the master or any person authorized in this behalf by the master or owner:-

- i. Pay his fare, if not already paid,
- ii. Present his ticket for examination.
- iii. Deliver such ticket at or near the end of the journey.

6A.2.3 No passenger shall alter or deface his ticket so as to render illegible the date or number or any other material portion thereof.

6A.2.4 No passenger shall take with him or keep on board an inland vessel;

- a) Any decayed meat, fish or vegetable, or any such other offensive article.
- b) Any dangerous and explosive material.
- c) Any firearms.

6A.2.5 No passenger on an inland vessel shall:-

- a) Obstruct or impede the master or any other officer of the Inland vessel in the discharge of his duties;
- b) in any way obstruct or interfere with the loading or unloading of luggage or cargo; obstruct passages / alleyways by goods / baggage / belongings
- c) Damage, or attempt to damage the Inland vessel or any article on board thereof;
- d) Enter or leave to attempt to enter or leave, any inland vessel when such Inland vessel is in motion;
- e) Without lawful reason, enter a compartment or place reserved for the use of another passenger or refuse to leave it when required to do so by the master or any other officer of the Inland vessel;

- f) Smoke or be in possession of a fire or light, in any part of the Inland vessel where smoking or the possession of a fire or light is not permitted by the master thereof;
- g) Be drunk and disorderly, or drunk and incapable of taking care of himself;
- h) Commit any nuisance or act of indecency or use obscene or abusive language;
- i) Without lawful excuse, molest or interfere with the comfort of any other passenger.

6.A.2.5 No male passenger on an inland vessel, knowing that a compartment or place has been reserved for the exclusive use of females, shall enter such compartment or place without lawful reasons, or having entered it, shall remain therein after being required by the master, or any other officer of the Inland vessel to leave it.

### **6A.3 Master's Authority to Evict Passengers:**

6A.3.1 The master or owner or any employee authorized in this behalf by the owner or master, of any inland vessel may make the following passengers leave the Inland vessel, namely:-

**Master's  
Authority to  
Evict  
Passengers**

- a) Insane passengers, and their attendants (if any), if they have embarked without the specific permission of the master, or of the authorized employee;
- b) Passengers suffering from an infectious or contagious disease, when they have embarked without the specific permission of the master or owner or of the authorized employee;
- c) Passengers who are drunk and incapable of taking care of themselves;
- d) Passengers who are disorderly, or are otherwise in such a state, or are conducting themselves in such a manner, as to cause or likely to cause annoyance to other passengers;
- e) Passengers carrying fire arms or any weapon without the special permission of the master or of the authorized employee.
- f) Any passengers who have embarked in excess of the maximum number of passengers which may lawfully be carried in the Inland vessel or in the part of the inland vessel thereof in which they propose to travel; and

g) Passengers who have not paid their fare.

6A.3.2 A person who has been refused permission to an inland vessel under rule 6A.1 shall not embark thereon; and a person who is required under Sub-rule 6A.3.1 to leave an inland vessel shall leave at such convenient time and place as the master / owner or authorized employee may direct.

6A.3.3 Provided that any person who is refused admission under rule (f) of sub rule 6.3.1 to leave shall be entitled to have his fare returned to him.

#### **6A.4 Rights of the Passengers:-**

Master / Owner / Manager of the passenger vessels shall take appropriate steps to ensure that rights of the passengers including but not limited to the following are assured:-

#### **Rights of the Passengers**

##### **1. The Right to Safety and Security:-**

- a) Good, safe and certified inland vessels shall be deployed for passenger carriage.
- b) Over all hygiene of inland vessels, toilets, hotels, shops etc.
- c) Protection from Crew-made casualties like unsafe working practices in handling / managing of passengers and operation of vessels.
- d) Security of life and assets.

##### **2. The Right against cancellations or delays due to man-made causes:-**

- a) Controlling actions which block the passenger movements such as Bandh, harthals, strikes, procession etc.
- b) Protection from cancellation of journey (full/part) for the benefit of service provider.
- c) Controlling Overall man-made delays
- d) Optimized journey time

##### **3. The Right for courteous service and comfort:-**

- a) Crew behavior and supportive staff behavior.
- b) Comfort on vessel and in waiting area at jetty.

- c) Ease of boarding and alighting.

**4. The Right to be informed:-**

- a) Proper information on arrival time, departure time, running time, fare etc.
- b) Route and stops / halts information on the inland vessel.
- c) Facts to make an informed choice like insurance / compensation against injury / loss of life.
- d) Protection against misleading information.

**5. The Right to be heard:-**

- a) Considering passenger views in policy making.
- b) Development of passenger service industry based on passenger needs and wants.

**6. The Right to redress.**

- a) Fair settlement of complaints.
- b) Setting up of Grievance Redressal Mechanism and control room.

**6A.5 Case of Epidemic Disease on board:-**

6A.5.1 Whenever any case of plague, cholera or other dangerous epidemic disease occurs on board an Inland Vessel, the Master or Person in-charge, shall immediately:-

- a) Remove the patient, together with his bedding, drinking utensils and food, to a part of the deck at the extreme stern of the Inland Vessel or to a suitable place / cabin allocated for isolation of such patients. In the case of plague, the clothing, bedding, and if considered necessary the baggage of the patient shall be disinfected immediately;
- b) cause all excreta, vomit and urine which may have been discharged on to the dock / vessel by the patient, to be cleaned away with a solution of cyllin and
- c) Report the case to the Sub-divisional of District Magistrate within whose jurisdiction the nearest facility of berthing / mooring lines, and also to the Chief Medical Officer of the district.
- d) Where such place of berthing / mooring is not at the headquarters of a sub-division or district, the report mentioned in sub-clause (c) of this

**Epidemic  
Disease On  
board**

Sub-section shall be sent by the Master or Officer-in-charge, as the case may be, by the most expeditious means available, to the next headquarters of a sub-division or district which the Inland vessel will touch.

6A.5.2 If, when the case occurs, the Inland Vessel is lying at berth / mooring at the headquarters of a sub-division or district, or otherwise, when the Inland Vessel has reached the nearest berth / mooring facility which is at such headquarters, the Master or Officer in-charge shall not move the Inland Vessel there from until permission has been given by the District Magistrate or Sub-divisional Magistrate as the case may be.

6A.5.3 On receipt of the report mentioned in sub-rule 6A.5.1 the Magistrate shall at once depute a Medical Officer to inspect and disinfect the Inland Vessel.

6A.5.4 Such Medical Officer shall visit the Inland Vessel and if a suitable hospital is available, or if other satisfactory arrangements can be made for the patients' treatment and segregation, shall bring the patient to land.

6A.5.5 Where no such hospital is available, and no such arrangement can be made, the patient shall not be allowed to land, but the Medical Officer deputed under sub-rule 6A.5.3 shall take steps to ensure the proper segregation of the patient on the Inland Vessel, and to satisfy himself that every possible precaution has been taken to prevent the spread of the disease.

6A.5.6 The Medical Officer deputed under sub-rule 6A.5.3 shall, in all cases, cause the deck, cabins, latrines and any other part of the Inland Vessel, while the patient has been, to be thoroughly disinfected.

6A.5.7 In case of death of a passenger, the body of the patient shall be wrapped in cloth soaked in a strong solution of cyllin or suitable disinfectant, and handed over to his relatives, friends, or where he is without relatives / friends, to the police, who shall arrange for its disposal.

6A.5.8 If not already disinfected in accordance with the provisions of clause 6A.5.3 the clothes of the deceased (except those in the bedding and all food in his possession shall be burnt, unless the contrary are passed by the Medical Officer.

6A.5.9 When the orders contained in these rules have been complied with, and The Medical Officer deputed under sub-rule 6A.5.3 is satisfied that there is no reason further to detain the inland vessel, he may give permission to the vessel to proceed on the journey.

6A.5.10 The owner of every inland vessel shall be bound to keep on board each inland vessel, five liters of cyllin or suitable disinfectant.

6A.5.11 The patient may be permitted to land on the expiry of a period to be fixed by the Medical Officer deputed under sub-rule 6A.5.3

#### **6A.6 Cargo Loading in Passenger cum cargo vessels:-**

6A.6.1 A passenger cum cargo inland vessel carrying both passengers and cargo, all cargo carried on deck shall be efficiently stowed to prevent it from shifting.

6A.6.2 A space of at least 75 centimeters wide on each side of the cargo, and within the bulwarks, shall be kept clear as fore and aft passage way.

**Cargo  
Loading in  
Passenger  
cum Cargo  
Vessels**

#### **6A.7 Power to Arrest:-**

6A.7.1 The master or any other officer of an inland mechanically propelled vessels, and any person called by him to his assistance, may arrest any person who has committed a breach of any rule made under this section, even if the name and address of such person are unknown to the master or such other officer.

6A.7.2 The procedure prescribed by section 43 of the Code of Criminal Procedure, 1973 in the case of arrest by private persons shall apply to every arrest made under this section.

**Powers to  
Arrest**

#### **6A.8 Passenger Accommodation:-**

6A.8.1 Area of each part of passenger space and the length of seats therein shall be measured and the lesser of the numbers given by area and by seating shall be the allowable number during fair season provided that in open vessels the allowable number of passengers is not to exceed two per 0.3 meter of length of the vessel and in no case to exceed 100.

**Passenger  
Accomm-  
odation**

6A.8.2 Total number of passengers permitted to be carried during the foul season shall not exceed two third the total number allowed for fair season provided that vessels operating in sheltered waters such as creeks may be permitted to carry same number of passengers throughout the year.

6A.8.3 In passenger ferries plying by day and night, number of passengers permitted by night shall be three fourth of that by day.

6A.8.4 Passenger ferries plying with seating and standing passengers on single deck vessels on short cross / along sheltered water voyage by day and by night up to 2200 hours shall have the number of standing passengers calculated at not less than 0.21 sq. m per person after deducting the deck area required for the number of seating passengers and area for ventilators, skylights, windlass, safety appliances and vessel utility area etc.

6A.8.5 Open Launches:-

- a) The forward extremity of the space available for the passenger accommodation is to be determined by the Surveyor, with due regard to the proper stowage of the anchor and cable and to any other necessary equipment in the bow of the vessel, and the length shall be measured from this point to the foreside of the bulkhead separating the machinery space from the passenger space.
- b) If the machinery is placed amidships, and additional space is available for passengers between the after bulkhead of the machinery space and a position near the stern of the vessels, to be determined by the Surveyor as suitable having due regard to the steering arrangements and fuel tank space. The breadths are to be measured at suitable intervals to the back of the side benches or to the inside of gunwale or to the inside of the half deck (where fitted) whichever measurement is least.
- c) The space abreast of the machinery space may be included in the passenger measurements if the engine is enclosed by a casting of longitudinal bulkheads and if the distance between the sides of the casting or bulkheads and the back seats is at least 0.9m.



- d) The number of passenger allowable by area shall be found by dividing by 0.36 the area in square meters of the clear space measured as above. Allowance shall be made for the crew and baggage in the area measurements (15%). The number allowable by seating shall be found by dividing the length in meter of each continuous fixed seat by 0.45.
- e) Seating on buoyant apparatus shall be computed separately.

**6A.8.6 Decked Launches:-**

- a) The forward extremity of the space available of the space for the passenger accommodation shall be determined as above for open launches, and the clear area of this space is to be obtained by deducting all encumbrances such as skylights, companions, machinery casings, navigating spaces, life boats and ventilator.
- b) The maximum number of passengers that may be allowed shall be ascertained by using the divisor 0.56 for the area of deck in square meter of the saloon or cabin floor below deck. Only one saloon below deck shall be included in passenger measurement, except that where the vessel has an appropriate standard.

**6A.8.7** In all vessels the seating must be so arranged that there will be no serious obstacle to prevent a person from passing forward and aft quickly in case of emergency.

**6A.8.8** No space within 0.5 m of entrance to any ladder way, wash place or lavatory shall be included in the space measured for passengers.

**6A.8.9** Vessels engaged in carrying large number of passengers shall have a strong barrier constructed on each deck.

**6A.9** Notwithstanding anything contained in these rules, the Government, by a general or a specific order, may direct the vessel owners, vessel builders or persons / passengers involved in any manner with vessel operation to add / delete / amend certain technical specifications of vessels or of its operational aspects in order to enhance safety of vessels, monitoring of movement, passengers comfort and general rules of the Inland Transport Sector.

**PART – B****FIRE APPLIANCES TO BE CARRIED IN INLAND  
MECHANICALLY PROPELLED VESSELS****Part – B  
Fire  
Appliances****6B.1 Application:-**

This rule shall apply to all vessels excepting the following for the reasons stated against each:-

**Applications**

- a) Vessels above 500 tons gross. These vessels shall be required to comply with requirements of Merchant Shipping (Fire Appliances) rule 1969 as applicable to ships on coastal voyages.
- b) Hovercrafts: - Requirements in respect of hovercrafts shall be specially considered by the competent officer.
- c) Provided that these rules do not apply to the existing vessels for a period of 6 months from the date of publication of these rules or till their next annual survey whichever is early.

**6B.2 Fire Control and Fire Fighting Appliances Plan:-**

All inland vessels shall carry on board a copy of approved plan showing the detailed location of all the Fire Control and Fire Fighting Appliances fitted / carried on board.

**Fire Control  
&  
Appliances  
Plan****6B.3 Safety Equipment Plan:-**

In lieu of separate plans described in 6B.2 and 6C.2, an inland vessel may carry a combined Fire Fighting and Life Saving Appliances plan called as Safety Equipment Plan.

**Fire Safety  
Plan****6B.4 Fire Fighting Appliances to be carried on-board:-**

All inland vessels shall be fitted with the following type of firefighting appliances:-

**Fire  
Fighting  
Appliances**

- a) Power Driven Fire Pump:- In every decked vessel and above 150 tons gross in other vessels at least one.
- b) Hand Operated Fire Pump:- In every vessel exceeding 21 meters in length at least one.

- c) Water services pipes, Hydrants, Fire Houses: - In every vessel required to carry a fire pump with water services pipe hydrants and fire hoses so arranged that at-least one powerful jet of water may be directed to any part of the vessel. Hoses shall not be less than 32 mm in dia.
- d) Nozzles: - One jet cum spray nozzle for every fire hose carried in accordance with these rules.
- e) Fire Axe: - At least one in every vessel exceeding 15 meters in length.
- f) Fire Buckets; - At least one for each number of the crew with the minimum of two. Fifty percent of those buckets are to be fitted with lanyards. No vessels need carry more than 20 buckets.
- g) Sand Box with Scoop: - In every vessel one in machinery and boiler spaces. Quantity of sand shall not be less than 0.075 cubic meters.
- h) Non Portable Foam Type Fire Extinguishers: - In case of motor vessels exceeding 30 meter length at least one. Capacity of such extinguishers shall not be less than 45 liters.
- i) Portable fire extinguishers shall be provided on board vessels as follows:-

| <u>Lengths</u>          | <u>Extinguishers Type</u>                    |
|-------------------------|--|
| Less than 10 m          | 1x4 liter chemical foam                      |
| 10 m to less than 12.5m | 1x4 liter chemical foam<br>2x5 kg dry powder |
| 12.5m to less than 15 m | 2x9 liter chemical foam<br>2x5 kg dry powder |
| 15 m and above          | 2x9 liter chemical foam<br>3x5 kg dry powder |

***Passenger vessels and cargo-passenger vessels 12.5 m and above in length shall carry twice the number of extinguishers required by above table for vessels of their length.***

- j) Smothering Arrangement: - All fixed installation in vessels of over 24 m length having areas containing fuel oil installations shall be covered by smothering arrangement so fixed CO2 type or fixed water sprinkler type. The capacity of the smothering system shall be adequate and to the satisfaction of the competent authority.

**6B.5 Fire Fighting Drills:-**

6B .5.1 The master of every inland vessel shall ensure that mock fire drills are carried out at-least once every month in as realistic manner as practicable.

**Fire  
Fighting  
Drills**

6B.5.2 A record of drills carried out as per 6B.5.1 above shall be recorded in the official log book.

**6B.6 Arrangements for Emergency Escape:-**

Minimum two widely separated escape openings / ladders / stairs need to be provided for totally enclosed accommodations and under deck crew accommodations (if any) and under deck spaces including machinery space for human occupancy.

**Emergency  
Escape**

**6B.7 Penalty:-**

Any breach of provisions in these rules shall be punishable with Imprisonment for a term which may extend to 6 months or fine which may extend to 500 rupees or both.

**Penalty**

**PART – C****LIFE SAVING APPLIANCES TO BE CARRIED IN INLAND  
MECHANICALLY PROPELLED VESSELS****Part – C  
Life Saving  
Appliances****6C.1 Classification of vessels:-**

For the purposes of this part the inland vessels shall be classified as namely:-

**Classification  
of vessels for  
LSA**

- a) Class I – Passenger vessels and Ferry launches boats.
- b) Class II – Cargo vessels and vessels other than those falling under Class I, Class III, and IV.
- c) Class III – Non-propelled vessels (Barges)
- d) Class IV – Pleasure crafts adventure vessels

**6C.2 Life Saving Appliances Plan:-**

All inland vessels shall carry on board a copy of approved plan showing the detailed location of all the Life Saving Appliances fitted / carried onboard.

**Life Saving  
Appliances  
Plan****6C.2 (a) Safety Equipment Plan:-**

In lieu of separate plans described in 6B.2 and 6C.2, an inland vessel may carry an approved combined Fire Fighting and Life Saving Appliances plan called as Safety Equipment Plan.

**Safety  
Equipment  
Plan****6C.3 Life Saving Appliances to be carried on-board:-**

6C.3.1 An inland vessel of class I shall carry:-

**Life Saving  
Appliances**

- a) Sufficient number of life rafts or buoyant apparatus to accommodate at least 100% number of passengers and crew on board.
- b) One life jackets each for 100% of the passengers and crew onboard.
- c) Life jacket for child, for 10% of total number of persons certified to carry. For the purpose of this section, child means person below 30 kgs.
- d) At least four lifebuoys for vessels up to 25 meter length, six life buoys for vessels 25-45 meter length and 8 life buoys more than 45 meter length. At least two of the life buoys shall be with self-igniting light and buoyant line of 30 m in length.

- e) Every vessels of Class 1 passenger capacity 150 shall have at least one life boat with minimum passenger capacity of ten persons. The boat shall be provided with necessary equipment for launching. Boats are to be stowed on either side of the vessels if more than one boat is provided.
- f) Life boats plus life rafts together to accommodate 100% of the Passengers and crew onboard.
- g) All crew of should possess sufficient training in rescue and first aid.
- h) All boats shall have headlights, search lights, hand torches and emergency lanterns.

6C.3.2 An inland vessel of class I shall carry:-

- a) At least one life raft to accommodate all crew for vessel over 10 meters.
- b) One life jacket for each crew or person onboard.
- c) At least two life buoys for vessels up to 25 meter length and four life buoys for above 25 meter of which one shall be equipped with self-igniting light and buoyant line of 30 m in length.

6C.3.3 A manned inland vessel of class III shall carry:-

- a) One life jacket for every crew on board.
- b) At least two life buoys, one of which shall be equipped with self switching lights and buoyant line of 30 m in length.

6C.3.4 A manned inland vessel of class IV shall carry:-

- a) Every vessel of class IV up to 10 meter in length shall carry life jacket for each person.
- b) Vessel of 10 meters or more in length shall in addition to life jacket for each person carry sufficient life raft for all persons onboard.
- c) In vessels falling under sub-rule 6C3.4 (b) above, if the life rafts could not be accommodated, sufficient number of lifebuoys providing 100% buoyancy shall be provided.
- d) However all vessels of class IV shall carry at least 2 life buoys of which one shall be fitted with self-igniting light and buoyant line of 30 m in length.

**6C.4 Technical Requirements:-**

Every life saving appliances provided as per provisions of these rules shall be meeting the technical requirements contained in the International Life Saving Appliances Code and type approved by MMD or Competent Authority of the State. All life-saving appliances shall be properly stowed as per the approved plan and maintained / serviced as per the requirements of International Life Saving Appliances Code.

**LSA Technical  
Requirements**

**6C.5 Operational readiness, maintenance and inspection:-**

6C.5.1 Before vessels leave port and at all times during the voyage, all life-saving appliances on board shall be in working order and ready for immediate use.

**Maintenance  
& Inspection  
of LSA**

6C.5.2 Instructions for on-board maintenance of life-saving appliances shall be easily understood and illustrated where possible.

6C.5.3 The general emergency alarm system shall be tested weekly.

6C.5.4 Inflatable life-rafts shall be serviced at intervals of not more than 12 months at an approved servicing station. However, in cases where the service of a vessel and the location of approved service station make it impossible to comply with this requirement, the Competent Authority may allow this period to be extended but in no case shall this period be greater than 18 months.

6C.5.4 A report of the inspection shall be entered in the official log book.

**PART – D****LIGHTS, SOUND SIGNALS AND PREVENTION OF COLLISION**

**Part – D**  
**Lights,**  
**Sound**  
**Signals and**  
**Prevention**  
**of collusion**

**6D.1 Steering and Sailing Rules:-****6D.1.1 Look – Out:-**

Every vessel shall at all times maintain a proper look-out by sight and hearing as well as by all available means appropriate to the prevailing circumstances and conditions so as to make a full appraisal of the situation and of the risk of collision.

Every vessel shall make use of search lights to locate luminous marks used for channel marking.

**Steering &**  
**Sailing**  
**Rules**  
**Lock-Out**

**6D.1.2 Safe Speed:-**

- (1) Every vessel shall at all time proceed at a safe speed so that she can take proper and effective action to avoid collision and grounding, and be stopped within a distance appropriate to the prevailing circumstances and conditions.
- (2) In determining a safe speed the following factors shall be among those taken into account.
  - (a) The state of visibility;
  - (b) The traffic density including concentrations of fishing vessel or other vessels.
  - (c) The maneuverability of the vessel with special reference to stopping distance and turning ability in the prevailing conditions.
  - (d) The state of the river, wind, current / river stream and the proximity of navigational hazards;
  - (e) State and availability of shore navigational aids and channel marking by day and night;
  - (f) Speed restrictions imposed by the waterway authority;

**Safe Speed**



- (g) The draught of the vessel in relation to available depth of water; and
- (h) At nights, the presence of back ground light such as from the shore lights or from the back scatter other own lights.

#### 6D.1.3 Risk of collision:-

- (1) Every vessel shall use all available means appropriate to the prevailing circumstance and conditions to determine if risk of collision exists. If there is any doubt, such risk shall be deemed to exist.
- (2) In determining if risk of collision exists the following consideration shall be among those taken into account:-
  - (a) Such risk shall be deemed to exist if a compass bearing of an approaching vessel does not appreciably change and apparent distance from own vessel decreases;
  - (b) Such risk may sometimes exist even when an appreciable bearing change is evident, particularly when approaching a very large vessel or a low or when approaching a vessel at close range; and
  - (c) For vessel not fitted with a compass, if the relative position remains unchanged.

#### **Risk of Collision**

#### 6D.1.4 Action to avoid collision:-

- (1) Any action taken to avoid collision shall, if the circumstances of the case admit be positive, made in ample time and with due regard to the observance of good seamanship.
- (2) Any alteration of course or speed to avoid collision shall, if the circumstances of the case admit be large enough to be readily apparent to another vessel. A succession of small alternations of course and / or speed should be avoided.
- (3) If there is sufficient room, alteration of course and one may be the most effective action to avoid a close quarter's situation provided that it is made in good time, is substantial and does not result in another close quarter's situation.
- (4) Action taken to avoid collision with another vessel shall be such as to result in passing at a safe distance the effectiveness of the action shall be carefully checked until the other vessel is finally passed and clear.

#### **Action to Avoid Collision**

- (5) If necessary to avoid collision or allow more time to assess the situation, a vessel shall slacken her speed or take the way off by stopping or reversing her means of propulsion.

**6D.1.5 Narrow channels:-**

- (1) A vessel proceeding along the course of a narrow channel shall keep as near to the outer limit of the channel which lies on her starboard side as is safe and practicable. A vessel of less than 10 meters in length or a sailing vessel shall not impede the passage of a vessel which can safely navigate only within the marked channel.
- (2) A vessel engaged in fishing shall not impede the passage of any other vessel in the navigable channel;
- (3) A vessel shall not cross a navigable channel if such crossing impedes the passage of vessel proceeding up stream or downstream along the navigable channel;
- (4) A vessel nearing a bend or an area of narrow channel where other vessels may be obscured by an intervening obstruction shall navigate with particular alertness and caution and shall sound the appropriate signal;
- (5) Every vessel shall, if the circumstances of the case admit, avoid anchoring in a narrow channel.
- (6) When single lane traffic is in force, vessels shall join the lane only when the traffic signal permits to do so. While in the lane, the vessels shall proceed with maximum permissible speed and clear the channels as quickly as possible. Vessels shall not stop or anchor in a traffic lane and shall exercise caution while joining or leaving the single lane to avoid collision with waiting vessels at anchor.

**Narrow  
Channels**

**6D.2 Conduct of vessels in sight of one another:-**

**6D.2.1 Sailing vessels:-**

When two sailing vessels are in sight of one another or approaching one another so as to involve risk of collision, one of them shall keep out of way of the other as follows:-

**Conduct of  
Vessels in  
Sight of one  
another**

- (1) In a non-tidal river when one vessel is proceeding upstream and the other vessel proceeds downstream the vessel proceeding upstream shall keep out of the way of the other;
- (2) When both are proceeding, upstream or downstream and in a tidal lagoon the vessel which is to windward shall keep out of the way of the vessel which is to leeward;
- (3) A vessel which is running free shall keep out of the way of a vessel which is close-hauled; and
- (4) A vessel which is close-hauled on the port tack shall keep out of the way of a vessel which is close-hauled on the starboard tack.
- (5) For the purpose of these rules, upstream shall be deemed to be the direction against the current and downstream the direction with the current. Windward side shall be deemed to be the side opposite to that of which the main sail or the largest fore and after sail is carried.

**Sailing  
Vessels****6D.2.2 Overtaking:-**

- (1) Notwithstanding anything contained in these rules any vessel overtaking any other shall keep out of the way of the vessel being overtaken;
- (2) A vessel shall be deemed to be overtaking when coming up with another vessel from a direction more than 22.5 degrees abaft her beam. That is, in such a position with reference to the vessel she is overtaking, that at night she would be able to see only the stern light / towing light of that vessel but neither of her side lights; and
- (3) Any subsequent alternation or bearing between two vessels shall not make the overtaking vessel a crossing vessel within the meaning of these rules or relieve her duty of keeping clear of the over taken vessel until she is finally passed and cleared.

**Overtaking****6D.2.3 Head-on situation:-**

When two mechanically propelled vessels are meeting on reciprocal or nearly reciprocal courses so as to involve risk of collision each shall alter her course to starboard so that each shall pass on the port side of the other.

**Head-on  
Situation**

**6D.2.4 Crossing situation:-****Crossing  
Situation**

When two mechanically propelled vessels are crossing so as to involve risk of collision, the vessel which has the other on her own starboard side shall keep out of the way and shall, if the circumstances of the case admit avoid crossing ahead of the vessel.

**6D.2.5 Action by Give-way vessel:-****Action by  
Give Way  
Vessel**

6D.2.5.1 Where by any of the rules of Part E of this chapter, one of the two vessels is required to keep out of the way of the other vessel, the vessel required to keep out of the way of the other vessel is called as Give Way Vessel.

6D.2.5.2 Every vessel which is directed by these rules to keep out of the way of another vessel shall, so far as possible take early and substantial action to keep well clear.

**6D.2.6 Action by stand-on vessel:-****Action by  
Stand on  
Vessel**

6D.2.6.1 Whereby any of the rules of Part D of this chapter, one of the two vessels is required to keep out of the way of the other vessel, the other vessel is called as Stand on Vessel

6D.2.6.2 A Stand on Vessel shall keep her course and speed.

6D.2.6.3 The Stand on Vessel may however take action to avoid collision by her maneuver alone, as soon as it becomes apparent to her that the vessel required to keep out of the way is not taking appropriate action as required by these rules.

6D.2.6.4 When from any cause, the vessel required to keep her course and speed finds herself so close that collision cannot be avoided by the action of the give-way vessels along, she shall take such action as will best aid to avoid collision;

6D.2.6.5 A vessel which takes action in a crossing situation in accordance with sub paragraph 6D.2.6.3 of this rule to avoid collision with another vessel, shall if the circumstances of the case admit, not alter course to port for a vessel on her own port side; and

6D.2.6.6 These rules do not relieve the give-way vessel of her obligation to keep out of the way.

**6D.2.7 Responsibilities of (between) vessels:-**

6D.2.7.1 A mechanically propelled vessel underway shall keep out of the way of:-

- a) a vessel is not under command;
- b) a vessel restricted in her ability to man oeuvre;
- c) a vessel engaged in fishing;
- d) a sailing vessel, vessel under oars or country boat; and
- e) a vessel proceeding downstream by a vessel proceeding upstream, if the prevailing circumstances permit.

**Responsibilities  
Between  
Vessels**

6 D.2.7.2 A sailing vessel under way shall keep out of way of:-

- a) a vessel not under command;
- b) a vessel restricted in her ability to maneuver; and
- c) a vessel engaged in fishing.

6D.2.7.3 A vessel engaged in fishing when underway shall, so far as possible, keep out of the way of:

- a) a vessel not under command; and
- b) a vessel restricted in her ability to maneuver.

**6D.3 Conduct of vessel in restricted visibility:-**

6D.3.1 This rule applies to vessels not insight of one another when navigating in or near an area of restricted visibility;

6D.3.2 Every vessel shall make appropriate sound signals in accordance with these rules and exhibit lights while navigating in restricted visibility.

6D.3.3 Every vessel shall proceed at a safe speed adapted to the prevailing circumstances and conditions of restricted visibility. A mechanically propelled vessel shall have her engines ready for immediate maneuver.

6D.3.4 Every vessel shall have due regards to the prevailing circumstances and conditions of restricted visibility when complying with the rules of this part.

6D.3.5 Except where it has been determined that risk of collision does not exist every vessel which hears apparently forward her beam the fog signal of another vessel or which cannot avoid a close-quarter situation with another vessel forward of her beam, shall reduce her speed, she shall if

**Conduct of  
Vessels in  
Restricted  
Visibility**

necessary take all her way off and in any event navigate with extreme caution until danger of collision is over.

#### **6D.4 Lights & Shapes:-**

##### **6D.4.1 An application**

##### **Lights & Shapes**

##### **Application**

- a) Provisions of this Rule shall be complied with in all weather.
- b) The rules concerning lights shall be complied with from sunset to sunrise, and during such times no other lights shall be exhibited, except such, lights as cannot be mistaken for the lights specified in these rules, do not impair their visibility or distinctive character, or interfere with the keeping of a proper look-out.
- c) The lights prescribed by these rules shall, if carried, also be exhibited from sunrise to sunset in restricted visibility and may be exhibited in all other circumstances when it is deemed necessary.
- d) The rules concerning shapes shall be complied with by day.
- e) The lights and shapes unless otherwise specified in these rules shall comply with the positioning and technical details as per the provisions of Annex – 1 to International Rules for preventing of collision at sea (1972).

##### **6D.4.2 Different lights used in vessels**

##### **Different Lights**

- A) Masthead Light a white light placed over the fore and aft centerline of the vessel showing an unbroken light over an arc of the horizon of 225 degree and so fixed as to show the light from right ahead of 22.5 degree abaft the beam on either side of the vessel. This light shall be placed as far as practicable at height above the hull of not less than 3 meters for vessels of 20 meters or more in length and 2 meters for vessels of less than 20 meters in length.
- B) Side lights a green light on the star board side and a red light on the port side each showing an unbroken light over an arc of the horizon of 112.5 degrees and so fixed as to show the light from right ahead of 22.5 degrees abaft the beam on its respective side. In a vessel of less than 20 meters in length the sidelights may be

combined in one lantern carried the fore and aft centerline of the vessel. Side lights shall be placed not less than 1 meter below the mast head light.

- C) Stern light a white light placed as nearly as practicable at the stern showing an unbroken light over an arc of the horizon of 135 degree and so fixed as to show the light 67.5 degrees from right aft on each side of the vessel.
- D) Towing light a yellow light having the same character as – Stern light mentioned in sub rule (c) of this rule.
- E) All-round light a light showing an unbroken light over an arc of the horizon of 360 degrees.
- F) Flashing light a light flashing at regular intervals.

#### **6D.4.3 Visibility of Lights:-**

The lights prescribed in these rules shall be visible at the following minimum ranges:-

#### **Visibility of Lights**

- a) In a vessel of 20 meters or more in length, Masthead light 3 miles, Side lights 2 miles, Stern light 2 miles, Towing light 2 miles, All-Round light 1 mile.
- b) In a vessel less than 20 meters in length, Masthead light 2 miles, Side light 1 mile, Stern light 1 mile, All-Round light 1 mile.

#### **6D.4.4 Lights to be exhibited by mechanically propelled vessel under-way:-**

#### **Under-way Vessel Lights**

6D.4.4.1 A mechanically propelled vessel under-way shall exhibit:-

- a) A masthead light forward. A vessel of 50 meters or more in length shall exhibit an additional masthead light at a suitable place and higher than masthead light forward.
- b) Side lights.
- c) A stern light.

6D.4.4.2 A mechanically propelled vessel of less than 10 meters in length in-lieu of the lights prescribed in paragraph (1) may exhibit an all-round white light, and shall if practicable also exhibit side lights or a combined lantern.

**6D.4.5 Lights to be exhibited by towing & pushing vessels:-**

6D.4.5.1 A mechanically propelled vessel when towing or pushing shall exhibit:-

- a) Two masthead lights forward in a vertical line. When the length of the two exceeds 200 meters three such lights in a vertical line. These lights will be in-lieu of light prescribed in sub-rule 6D.4.4.1 (a). The lights shall be placed not less than 1 meter apart and the lowest light placed at a height not less than two meters above the hull.
- b) Side lights.
- c) A stern light.
- d) A towing light in a vertical line above the stern light.

6D.4.5.2 When a pushing vessel and a vessel being pushed ahead are connected in a composite unit, they shall be regarded as a mechanically propelled vessel and exhibit the lights prescribed in sub-rule 6D.4.4

6D.4.5.3 A vessel or object being towed shall exhibit:-

- a) Side lights.
- b) A stern light.

6D.4.5.4 Provided that any number of vessels being towed or pushed in a group shall be lighted as one vessel.

6D.4.5.5 A vessel being pushed ahead, not being part of a composite unit, shall exhibit at the forward end, side lights.

6D.4.5.6 A vessel being pushed towed alongside exhibit a stern light and at the forward end side lights.

6D.4.5.7 Where from any sufficient cause, it is impracticable for vessel or object being towed to exhibit the lights prescribed in this rule, all possible measures shall be taken to light the vessel or the object towed at least to indicate the presence of unlighted vessel or object.

**6D.4.6 Lights to be exhibited by sailing vessel and vessels under oars:-**

6D.4.6.1 A sailing vessel shall exhibit:-

- a) Side lights.
- b) A stern light.

**Pushing &  
Towing  
Vessel  
Lights**

**Sailing  
Vessel &**



6D.4.6.2 In a sailing vessel of less than 20 meters in length the lights prescribed in paragraph 6D.4.6. may be combined in one lantern carried at or near the top of the mast where it can be seen.

**Vessel  
under Oars  
Light**

6D.4.6.2 A sailing vessel underway may in addition to the lights prescribed in paragraph 6D.4.6.1 of this rule, exhibit at or near the top of the mast where they can best be seen two all-round lights in a vertical line, the upper being red and lower be green.

6D.4.6.4 A sailing vessel less than 10 meters in length and a vessel under oars may exhibit lights prescribed in this rule, but if she does not, she shall have ready at hand an electric torch or lighted lantern showing white light which shall be exhibited in sufficient time to prevent collision.

#### **6D.4.7 Lights to be exhibited by fishing vessels:-**

6D.4.7.1 A vessel engaged in fishing shall exhibit:-

- a) Two all-round lights in a vertical line the upper being red and the low white and during the day a shape consisting of two cones with their apexes together in a vertical line or a basket.
- b) When making way through the water in addition to the lights prescribed in sub rule (a) above, side lights, and a stern light.

**Fishing  
Vessel  
Lights**

6D.4.7.2 A fishing vessel less than 10 m in length, a vessel under oars may exhibit lantern and shall have ready at hand an electric torch which shall be exhibited in sufficient time to prevent collision.

#### **6D.4.8 Lights to be exhibited by vessels not under command or restricted in their ability to maneuver:-**

6D.4.8.1 A vessel not under command shall exhibit:-

- a) Two all-round red lights in a vertical line where they can best be seen by night.
- b) Two balls or similar shapes in a vertical line by day.
- c) When making way through the water; side lights and a stern light addition to the lights prescribed in (a).

**NUC &  
RAM  
Vessels  
Light**

6D.4.8.2 A vessel restricted in her ability to maneuver shall exhibit:-

- a) Three all-round lights in a vertical line, the highest and lowest of these shall be red and the middle light shall be white.

- b) Three shapes in a vertical line, the highest and lowest shapes shall be balls and the middle one a diamond.
- c) When making way through the water, mast head lights, side lights and stern light in addition to the lights prescribed in (a)
- d) When at anchor, in addition to the lights and shapes prescribed in (a) and (b) above, lights and shapes prescribed in rule 6D.4.11 for anchored vessels shall also be exhibited.

**6D.4.9 Lights to be exhibited by vessels engaged in dredging:-**

A vessel engaged in dredging, in addition to the lights in Rule 6 D.4.8.2 shall exhibit by two all-round red lights or by day two balls in a vertical line to indicate the side on which obstruction exists.

**Lights to be  
exhibited by  
vessels  
engaged in  
dredging**

**6D.4.10 Lights to be exhibited by pilot vessels:-**

A vessel engaged on pilot age duty shall exhibit:-

- a) At or near the mast head two all – round lights in vertical line, the upper one white and the lower one red.
- b) When under way, in addition side lights and stern light.

**Pilot Vessel  
Lights**

**6D.4.11 Lights to be exhibited by anchored vessels and vessels aground:-**

6D.4.11.1 A vessel at an anchor shall exhibit:-

- a) In the fore part an all-round white light or one ball by day.
- b) At or near the stern and at a lower level than the light in (a), an all-round white light.

**Anchored &  
A grounded  
Vessel  
Lights**

6D.4.11.2 A vessel of less than 20 m in length may exhibit on all – round white light where it can be seen.

6D.4.11.3 A vessel grounded shall exhibit in addition to the lights prescribed in sub rule 6 D.4.11.1 and 6 D.4.11.2, where they can best be seen.

- a) Two all-round red lights in a vertical line.
- b) Three balls in a vertical line by day.

6D.4.11.3 In lieu of lights prescribed in this section, a vessel less than 10 m in length, a vessel under oars may exhibit lantern and shall have ready at hand an electric torch which shall be exhibited in sufficient time to prevent collision.

**6D.4.12 Lights to be exhibited by hydrofoils & mechanized country crafts:-**

**Hydrofoil &  
Country  
Craft Lights**

Where it is impracticable for a mechanized country craft or a hydrofoil to exhibit lights and shapes of the characteristics or in positions prescribed in the rules she shall exhibit lights and shapes as closely similar in characteristics and position as is possible.

**6D.5 Sound Signals:-**

**Sound  
Signals**

The sound signal appliances unless otherwise specified in these rules shall comply with the technical requirements as per the provisions of Annexure-III of the International Rules for prevention of collision at sea (1972)

**6D.5.1 Equipment for sound signals:-**

**Sound  
Signaling  
Equipment**

A vessel of 20 meters or more in length shall be provided with a whistle and a bell and a vessel of 100 meters or more in length, in addition shall be provided with a gong.

**6D.5.2 Maneuvering and warning signals:-**

**Maneuvering  
& Warning  
Signals**

6D.5.2.1 When vessels are in-sight of one another, a mechanically propelled vessel underway, when maneuvering as authorized or required by these rules, shall indicate her intentions by the following signals on her whistle.

- a) One short blast (a blast of about 1 second duration) to indicate – I am altering my course to star board.
- b) Two short blasts to indicate – I am altering course to port.
- c) Three short blasts to indicate – I am operating stern propulsion.

6D.5.2.2 An overtaking vessel and vessel being overtaken shall indicate their intention by sounding following signal:-

- a) Two prolonged blasts (blast of about 4 to 6 second duration each) followed by one short blast to indicate – I intend to overtake you on your starboard side.
- b) Two prolonged blasts followed by two short blasts to indicate – I intend to overtake you on your port side.

- c) A vessel being overtaken shall indicate her agreement by the following signals on her whistle; one prolonged, one short, one prolonged, one short blast, in that order. If in doubt she may sound signals prescribed in paragraph 6 D.5.2.3 below.
- d) When in doubt – When vessels in sight of one another are approaching each other and from any cause either vessel fails to understand the intentions or actions of the other or is in doubt whether sufficient action is being taken by the other to avoid collision, the vessel in doubt shall immediately indicate such doubt by giving at least 5 short and rapid blasts on the whistle, the signal may be supplemented by a light signal of at least 5 short rapid flashes.
- e) At bends – A vessel nearing bend or an area of a channel where other vessels may be obstructed, shall sound one prolonged blast, such signal shall be answered with a prolonged blast by any approaching vessel.

**6D.5.3 Sound signals in restricted visibility:-**

In or near an area of restricted visibility, where by day or night, signals prescribed in this rules shall be used as follows:-

- a) A mechanically propelled vessel making way through the water shall sound at intervals of not more than 2 minutes one prolonged blast.
- b) A mechanically propelled vessel underway by stopped and making no way through the water shall so at intervals of not more than 2 minutes two prolonged blasts in succession with an interval of about 2 seconds between them.
- c) A vessel not under command, a vessel restricted in her ability to maneuver, a vessel constrained by her draught, vessel engaged in towing, fishing or pushing another vessel, shall at intervals of not more than 2 minutes three blasts in succession namely one prolonged followed by two short blasts.

**Sound  
Signals in  
Restricted  
Visibility**

- d) A vessel at anchor shall at intervals of not more than one minute ring the bell rapidly for about 5 seconds. A vessel at anchor may in addition sound three blasts in succession namely one short, one prolonged and one short blast to give warning on her position, and possibility of collision to any approaching vessels. A vessel aground shall give three separate and distinct strokes on the bell immediately before and after the rapid ringing of the bell.
- e) A vessel of less than 10 meters in length shall not be obliged to give the above mentioned signals but shall make some other effective sound signals at intervals or not more than 2 minutes.

#### **6 D.6 Distress Signals:-**

When a vessel is in distress and require assistance from other vessels or from shore, the following shall be the signals to be used or displayed by her either together or separately.

#### **Distress Signals**

- a) A continuous sounding of any sound signal apparatus.
- b) A flag or a light waved in a circle to draw attention.
- c) Flares on the deck.
- d) "May day" transmitted by radio telephony.
- e) International code signal N. C. hoisted on the vessel.

#### **6 D.7 Exemptions:-**

Any vessel (or class of vessels) whose keel is laid or which is at corresponding stage of construction before the entry into force of these rules may be exempted from compliance there with of the following provisions until two years after the date of entry into force of these rules.

#### **Exemptions**

- a) The installation of lights with color specifications and intensity as prescribed in these rules.
- b) Repositioning of masthead lights and side lights on vessels resulting from application of these rules.
- c) The installation of lights with ranges prescribed in these rules

**6 D.8 Application of the provision of Port Rules and National Waterway Rules:-**

Notwithstanding anything mentioned above, the provisions of the Port Rules & Merchant Shipping (Prevention of Collision at sea) (Amendment) Regulation, 2002 for National Waterways shall also apply mutatis, to the mechanically propelled vessels while making voyages within the port limits and National waterways

**Port &  
National  
Waterway  
Mutatis  
Application**

**PART – E****RADIO COMMUNICATION AND SAFETY OF NAVIGATION****Part E****Radio****Communi-  
cation and  
safety of  
navigation**

For the purpose of this section, categorization of vessels is as per rule 2.2 of these rules. Vessels shall carry the radio and navigation equipment's as per the below table:-

| <b>Equipment</b>  | <b>Category A</b> | <b>Category B</b> |
|---|-------------------|-------------------|
| VHF radio installation capable of transmitting DSC on channel 70, and radiotelephony on channels 16, 13 and 6 | 1                 | 1                 |
| NAVTEX receiver   | 1                 | 1                 |
| SART  | 1                 | 0                 |
| Class A Automatic Identification System (AIS)   | 1                 | 1                 |
| Radar Operating on 9 GHz  | 1                 | 0                 |
| Echo Sounder  | 1                 | 1                 |
| Magnetic Compass – for steering and bearing   | 1                 | 1                 |
| Gyro Compass with repeaters for steering and bearing  | 1                 | 0                 |
| Rudder Angle Indicator  | 1                 | 1                 |
| Global Positioning System (GPS)   | 1                 | 1                 |
| Binocular   | 1                 | 1                 |
| Aldis Lamp or Searchlight   | 1                 | 1                 |
| Passage Charts  | Yes               | Yes               |
| Area Tide Tables  | Yes               | Yes               |
| Aneroid Barometer   | 1                 | 1                 |

**CHAPTER - VII**  
**INSURANCE OF MECHANICALLY PROPELLED VESSELS AGAINST THIRD**  
**PARTY RISKS**

**7.1 Requirement of Chapter VI A of the Act:-**

As per the provisions of section 54 C of Chapter - 5 A of the Act the provisions of Section 134, Chapter X, XI and XII of the Motor Vehicles Act, 1988 shall mutatis mutually apply, in relation to the mechanically propelled vessels as they apply in relation to motor vehicles, subject to certain modifications listed therein

**Require-  
ments of  
Chapter VI  
A of the Act**  
*mutatis  
mutandis*

**7.2 Duty of Master of an Inland Vessel in case of accident and inquiry to a person**

When any person is injured or any property of a third party is damaged, as a result of an accident in which an Inland Vessel is involved, the Master of the Inland Vessel or any other person in charge of the Inland Vessel shall:-

**Duties of  
Master in  
case of  
Accident  
and Injury  
to a person**

- (a) Unless it is not practicable to do so on account of mob fury or any other reason beyond his control, take all reasonable steps to secure medical attention for the injured person, by conveying him to the nearest medical practitioner or hospital, and it shall be the duty of every registered medical practitioner or the doctor on duty in the hospital immediately to attend to the injured person and render medical aid or treatment without waiting for any procedural formalities, unless the injured person or his guardian, in case he is a minor, desired otherwise;
- (b) Give on demand by a police officer any information required by him or, if no police officer is present, report the circumstances of the occurrence, including the circumstances, if any, or not taking reasonable steps to secure medical attention as required under rule (a), at the nearest police station as soon as possible, and in any case within twenty-four hours of the occurrence;



(c) Give the following information in writing to the insurer, who has issued the certificates of insurance, about the occurrence of the accident, namely:-

- I. Insurance policy number and period of its validity;
- II. Date, time and place of accident;
- III. Particulars of the persons injured or killed in the accident;
- IV. Name of the Master of the Vessel and the particulars of his certificate granted under Chapter III of the Inland Vessels Act, 1917.

**Explanation:-** For the purposes of this rule, the expression – Master of a Vessel includes the owner of the Inland Vessel

**Objects and Reasons:** - Rule 7.2 sets out the duties of the Master of a Vessel involved in accident, such as reporting the accident to the Police Station, rendering medical aid to the injured, etc.

### **7.3 Liability without fault in certain cases:-**

#### **7.3.1 Liability to pay compensation in certain cases on the principle of no fault:-**

**Liability  
without  
fault in  
certain  
cases**

- 1) Where death or permanent disablement of any person has resulted from an accident arising out of the use of an Inland Vessel, the owner of the Inland Vessel shall, or, as the case may be, the owners of the Inland Vessel shall, jointly and severally, be liable to pay compensation in respect of such death or disablement in accordance with the provisions of this section.
- 2) The amount of compensation which shall be payable under sub section in respect of death of any person shall be fixed sum of fifty thousand rupees and the amount of compensation payable under that sub-section in respect of permanent disablement of any person shall be fixed sum of twenty-five thousand rupees.
- 3) In any claim for compensation under sub rule (1), the claim and shall not be required to plead and establish that the death or permanent disablement in respect of which the claim has been made was due to any wrongful act, neglect or default of the owner or owners of the Inland Vessel concerned or of any other person

- 4) A claim for compensation under sub rule (1) shall not be defeated by reason of any wrongful act, neglect or default of the person in respect of whose death or permanent disablement the claim has been made nor shall the quantum of compensation recoverable in respect of such death or permanent disablement be reduced on the basis of the share of such person in the responsibility for such death or permanent disablement.
- 5) Notwithstanding anything contained in sub rule (2) regarding death or bodily injury to any person, for which the owner of the Inland Vessel is liable to give compensation for relief, he is also liable to pay compensation under any other law for the time being in force; Provided that the amount of such compensation to be given under any other law shall be reduced from the amount of compensation payable under this rule.

**Objects and Reasons:-** Rule 7.3.1 provides for liability to pay compensation in certain cases on the principle of no fault.

**7.3.2 Provisions as to other right to claim compensation for death or permanent disablement:-**

- 1) The right to claim compensation under rule 7.3.1 in respect of death or permanent disablement of any person shall be in addition to any of other right, except the right (such other right here after in this section referred to as the right on the Principle of fault) to claim compensation in respect thereof under any other provision of this Act or of any other law for the time being in force.
- 2) A claim for compensation under rule 7.3.1 in respect of death or permanent disablement of any person shall be disposed of as expeditiously as possible and where compensation is claimed in respect of such death or permanent disablement under rule 7.3.1 and also in pursuance of any right on the principle of fault, the claim for compensation under rule 7.3.1 shall be disposed of as aforesaid in the first place.

**Right to  
claim  
compensa-  
tion for  
death or  
permanent  
disable-  
ment**

- 3) Notwithstanding anything contained in sub-rule above(1), where in respect of the death or permanent disablement of any person, the person liable to pay compensation under rule 7.3.1 is also liable to pay compensation in accordance with the right on the principle of fault, the person so liable shall pay the first – mentioned compensation and:-
- a) If the amount of the first-mentioned compensation is less than the amount of the second-mentioned compensation, he shall be liable to pay (in addition to the first-mentioned compensation) only so much of the second-mentioned compensation as is equal to the amount by which it exceeds the first-mentioned compensation;
- b) If the amount of the first-mentioned compensation is equal to or more than the amount of the second-mentioned compensation, he shall not be liable to pay the second-mentioned compensation.

**Objects and Reasons:-** Rule 7.3.2 makes provision to claim compensation for death or permanent disablement besides the claim for compensation for no fault liability.

### **7.3.3 Permanent disablement:-**

For the purposes of this Chapter, permanent disablement of a person shall be deemed to have resulted from an accident of the nature referred to in sub-rule (1) of rule 7.3.1 if such person has suffered by reason of the accident, any injury of injuries involving:-

- a) Permanent privation of the sight of either eye or the hearing of either ear, or privation of any member or joint; or
- b) Destruction or permanent impairing of the powers of any members or joint; or
- c) Permanent disfiguration of the head or face.

**Objects and Reasons:-** Rule 7.3.3 seeks to classify injuries which are considered as permanent disablement for the purpose of Motor Vehicles Act, 1988.

**Permanent  
Disablement**

**7.3.4 Applicability of Chapter to certain claims under Act 8 of 1923:-**

The provisions of this Chapter shall also apply in relation to any claim for compensation in respect of death or permanent disablement of any person under the Workmen's Compensation Act, 1923 (8 of 1923) resulting from an accident of the nature referred to in sub-rule (1) of rule 7.3.1 and for this purpose, the said provisions shall, with necessary modifications, be deemed to form part of that Act.

**Applicability  
of chapter to  
certain  
claims under  
Act 8 of 1923**

**Objects and Reasons:-** Rule 7.3.4 lays down that the provision of this Chapter shall also apply in relation to any claims under Workmen's Compensation Act.

**7.4 Insurance of an Inland Vessel against third party risks:-****7.4.1 Definitions:-** In this Chapter:-

- a. "Authorized insurer" means an insurer for the time being carrying on general insurance business in India under the General Insurance Business (Nationalization) Act, 1972, and any Government Insurance Fund authorized to do general insurance business under that Act.

**Insurance of  
an Inland  
Vessel  
against  
Third Party  
Risks**

"Goods service vessel" means any mechanically propelled vessel used or adapted to be used for carrying of cargo for hire or reward;

**Definitions**

- b. Certificate of insurance means a certificate issued by an authorized insurer in pursuance of sub rule (3) of rule 7.4.3 and includes a cover not complying with such requirements as may be prescribed, and where more than one certificate has been issued in connection with a policy, or where a copy of a certificate has been issued, all those certificates or that copy, as the case may be;
- c. liability, where used in relation to the death of or bodily injury to any person, includes liability in respect thereof under rule 7.3.1;
- d. policy of insurance includes – (certificate of insurance) "public service vessel" means any mechanically propelled vessel used or adapted to be used for the carriage of passengers for hire or reward;

- e. "property" includes goods carried in the inland vessel, bridges, landing facilities, navigation marks and infrastructure;
- f. Reciprocating country means any such country as may on the basis of reciprocity be notified by the Central Government in the Official Gazette to be a reciprocating country for the purpose of this Chapter fa) "Route" means a line of travel which specifies the waterway which may be traversed by a mechanically propelled vessel between one terminal and another;
- g. Third party includes the Government.

**Objects and Reasons:-** Rule 7.4.1 seeks to define certain words and expressions appearing in rule 7.4 of this Chapter.

#### **7.4.2 Necessity for insurance against third party risk:-**

- 1) No person shall use, except as a passenger, or cause or allow any other person to use, an Inland Vessel in an Inland Waterway, unless there is in force in relation to the use of the Inland Vessel by that person or that other person, as the case may be, a policy of insurance complying with the requirements of this Chapter.

**Necessity of  
Insurance  
against  
third party  
risk**

Provided that in the case of an Inland Vessel carrying, or meant to carry, dangerous or hazardous goods, there shall also be a policy of insurance under the Public Liability Insurance Act, 1991 (6 of 1991).

**Explanation:-** The Master or person in-charge of an inland Vessel working merely as a paid employee, while there is in force in relation to the use of the Inland Vessel no such policy as is required by this sub-section, shall not be deemed to act in contravention of the sub-r unless he knows or has reasons to believe that there is no such policy in force.

- 2) Sub rule (1) shall not apply to any Inland Vessel owned by the Central Government or a State Government and used for Government purposes unconnected with any commercial enterprise.
- 3) The appropriate Government may, by order, exempt from the operation of sub rule (1) on any Inland Vessel owned by any of the following authorities, namely:-

- a) The Central Government or a State Government if the Inland Vessel is used for Government purposes connected with any commercial enterprise;
- b) any local authority;
- c) Any State Water Transport undertaking;

Provided that no such order shall be made in relation to any such authority unless a fund has been established and is maintained by that authority in accordance with the rules made in that behalf under Motor Vehicles Act, 1988 for meeting any liability arising out of the use of any Inland Vessel of that authority which that authority or any person in its employment may incur to third party.

**Explanation:-** For the purpose of this sub-section, appropriate Government means the Central Government or a State Government, as the case may be, and:-

- I. In relation to any corporation or company owned by the Central Government or any State Government, means the Central Government or that State Government;
- II. In relation to any corporation or company owned by the Central Government and one or more State Governments, means the Central Government;
- III. In relation to any other State Water Transport undertaking or any local authority, means that Government which has control over that undertaking or authority.

**Objects and Reasons:-** Rule 7.4.2 speaks of the necessity for insurance against third party risk.

#### **7.4.3 Requirement of policies and limits of liability:-**

- 1) In order to comply with the requirements of this Chapter, a policy of insurance must be a policy which:-
  - a) Is issued by a person who is an authorized insurer; and
  - b) Insures the person or classes of persons specified in the policy to the extent specified in sub rule (2) -
    - i. against any liability which may be incurred by him in respect of the death of or bodily injury to any person, including owner of the goods or

**Require-  
ment of  
Policies and  
limits of  
liability**

his authorized representative carried in the Inland Vessel or damage to any property of a third party caused by or arising out of the use of the Inland Vessel in an Inland Waterway;

- ii. Against the death of or bodily injury to any passenger of a public service vessel caused by or arising out of the use of the Inland Vessel in an Inland Water;

Provided that a policy shall not be required:-

- i. To cover liability in respect of the death, arising out of and the course of this employment, of the employee of a person insured by the policy or in respect of bodily injury sustained by such an employee arising out of and in the course of his employment other than a liability arising under the Workmen's Compensation Act, 1923 (8 of 1923), in respect of the death of, or bodily injury to, any such employee:-
  - a) engaged as Master or person-in-charge of the Inland Vessel, or
  - b) If it is a goods carriage, being carried in the Inland Vessel, or
- ii. To cover any contractual liability.

**Explanation:-** For the removal of doubts, it is hereby declared that the death of or bodily injury to any person or damage to any property of a third party shall be deemed to have been caused by or to have arisen out of, the use of an Inland Vessel in Inland Water notwithstanding that the person who is dead or injured or the property which is damaged was not in a Inland Water at the time of the accident, if the act or omission which led to the accident occurred in Inland Water.

- 2) Subject to the proviso to sub rule (1), a policy of insurance referred to in sub rule (1), shall cover any liability incurred in respect of any accident, up to the following limits, namely:-
  - a) Save as provided in rule (b), the amount of liability incurred.
  - b) In respect of damage to any property of a third party, a limit of rupees six thousand:
- 3) A policy shall be of no effect for the purpose of this Chapter unless and until it is issued by the insurer in favor of the person by whom the policy is effected a certificate of insurance in the prescribed form and containing the prescribed particulars of any condition subject to which

the policy is issued and of any other prescribed matters; and different forms, particulars and matter may be prescribed in different cases.

- 4) Where a cover note issued by the insurer under the provisions of this Chapter or the rules made there under is not allowed by a policy of insurance within the prescribed time, and insurer shall, within seven days of the expiry of the period of the validity of the cover note, notify the fact to the registering authority in whose records the Inland Vessel to which the cover note relates has been registered or to such other authority as the State Government may prescribe.
- 5) Notwithstanding anything contained in any law for the time being in force, an insurer issuing a policy of insurance under this section shall be liable to indemnify the person or classes of persons specified in the policy in respect of any liability which the policy purports to cover in the case of that person or those classes of persons.

**Objects and Reasons:-** Rule 7.4.3 lays down the requirements of the policies and the limits of liability in respect of passengers and persons other than passengers in relation to passenger vessels and goods carriages.

#### **7.4.4 Validity of policies of insurance issued in reciprocating countries:-**

Where, in pursuance of an arrangement between India and any reciprocating country, the Inland Vessel registered in the reciprocating country operates on any route or within any area common to the two countries and there is in force in relation to the use of the Inland Vessel in the reciprocating country, a policy of insurance complying with the requirements of the law of insurance in force in that country, then, notwithstanding anything contained in rule 7.4.3 but subject to any rules, such policy of insurance shall be effective throughout the route or area in respect of which, the arrangement has been made, as if the policy of insurance had complied with the requirements of this Chapter.

**Objects and Reasons:-** Rule 7.4.4 provides for the validity of policies of insurance issued in a reciprocating country in respect of Inland Vessels of the reciprocating country operating on any route common to the two countries.

**Validity of  
Policies of  
Insurance in  
Reciproca-  
ting  
Countries**



**7.4.5 Duty of insurers to satisfy judgments and awards against persons insured in respect of third party risks:-**

**Duties of  
Insurer to  
satisfy  
judgments  
and awards**

- 1) If, after a certificate of insurance has been issued under sub rule (3) of rule 7.4.3 in favor of the person by whom a policy has been effected, judgment or award in respect of any such liability as is requirement to be covered by a policy under rule (b) of sub rule (1) of rule 7.4.3 (being a liability covered by the terms of the policy) is obtained against any person insured by the policy, then, notwithstanding that the insurer may be entitled to avoid or cancel or may have avoided or cancelled the policy, the insurer shall, subject to the provisions of this section, pay to the person entitled to the benefit of the decree any sum not exceeding the sum assured payable there under, as if he were the judgment debtor, in respect of the liability, together with any amount payable in respect of costs and any sum payable in respect of interest on that sum by virtue of any enactment relating to interest on judgments.
- 2) No sum shall be payable by an insurer under sub rule (1) in respect of any judgment or award unless, before the commencement of the proceedings in which the judgment or award is given the insurer had notice through the Court or, as the case may be, the Claims Tribunal of the brining of the proceedings, or in respect of such judgment or award so long as execution is stayed thereon pending an appeal; and an insurer to whom notice of the brining of any such proceedings is so given shall be entitled to be made a party there to and to defend the action on any of the following grounds, namely:-
  - A) That there has been a breach of a specified condition of the policy, being one of the following conditions, namely:-
    - I. a condition excluding the use of the Inland Vessel:-
      - a. for hire or reward, where the Inland Vessel is on the date of the contract of insurance an Inland Vessel not covered by a certificate of registration granted under section 19F of the Inland Vessels Act 1917 to ply for hire or reward, or
      - b. for organized racing and speed testing, or

- c. for a purpose not allowed by the certificate of registration granted under section 19F of the Inland Vessels Act 1917 under which the Inland Vessel is used, where the Inland Vessel is a "public service vessel or goods service vessel."
- II.** a condition excluding manning by a named person or persons or by any person who is "not holding a certificate granted under Chapter III of the Inland Vessels Act, 1917", or by any person who has been disqualified for holding or obtaining a certificate granted under Chapter III of the Inland Vessels Act 1917 during the period of disqualification; or
- III.** a condition excluding liability for injury caused or contributed to by conditions of war, civil war, riot or civil commotion; or
- B)** That the policy is void on the ground that it was obtained by the non-disclosure of a material fact or by a representation of fact which was false in some material particular.
- 3) Where any such judgment as is referred to in sub rule (1) is obtained from a Court in a reciprocating country and in the case of a foreign judgment is, by virtue of the provisions of section 13 of the Code of Civil Procedure, 1908 (5 of 1908) conclusive as to any matter adjudicated upon by it, the insurer (being an insurer registered under the Insurance Act, 1938 (4 of 1938) and whether or not he is registered under the corresponding law of the reciprocating country) shall be liable to the person entitled to the benefit of the decree in the manner and to the extent specified in sub rule (1), as if the judgment were given by a Court in India;

Provided that no sum shall be payable by the insurer in respect of any such judgment unless, before the commencement of the proceedings in which the judgment is given, the insurer had notice through the Court concerned of the bringing of the proceedings and the insurer to whom notice is so given is entitled under the corresponding law of the reciprocating country, to be made a party to the proceedings and to defend the action on grounds similar to those specified in sub rule (2).

- 4) Where a certificate of insurance has been issued under sub rule (3) of rule 7.4.3 to the person by whom a policy has been effected, so much of the policy as purports to restrict the insurance of the persons insured thereby by reference to any conditions other than those in clause (b) of the sub rule (2) shall, as respects such liabilities as are required to be covered by a policy under clause (b) of sub rule (1) of rule 7.4.3 be of no effect:

Provided that any sum paid by the insurer in or towards the discharge of any liability of any person which is covered by the policy by virtue only of this sub-section shall be recoverable by the insurer from that person.

- 5) If the amount which an insurer becomes liable under this section to pay in respect of a liability incurred by a person insured by a policy exceeds the amount for which the insurer would apart from the provisions of this section be liable under the policy in respect of that liability, the insurer shall be entitled to recover the excess from that person.
- 6) In this section the expression – material fact and – material particular means, respectively, a fact or particular of such a nature as to influence the judgment of a prudent insurer in determining whether he will take the risk and, if so at what premium and on what conditions, and the expression – liability covered by the terms of the policy means liability which is covered by the policy or which would be so covered but for the fact that the insurer is entitled to avoid or cancel or has avoided or cancelled the policy.
- 7) No insurer to whom the notice referred to in sub rule (2) or sub rule (3) has been given shall be entitled to avoid his liability to any person entitled to the benefit of any such judgment or award as is referred to in sub rule (1) of in such judgment as is referred to in sub rule (3) otherwise than in the manner provided for in sub rule (2) or in the corresponding law of the reciprocating country, as the case may be.

**Explanation:-** For the purpose of this section, - Claims Tribunal means a Claims Tribunal constituted under rule 7.5.1 and award means an award made by that Tribunal under rule 7.5.4

**Objects and Reasons:-** Rules 7.4.5 lays down that it is the duty of the insurer to satisfy judgments against persons insured in respect of third party risk.

**7.4.6 Rights of third parties against insurers on insolvency of the insured:-**

**Rights of  
Third  
Parties  
against  
insurers on  
insolvency  
of the  
Insured**

- 1) Where under any contract of insurance effected in accordance with the provisions of this Chapter, a person is insured against liabilities which he may incur to third parties, then:-
  - a) In the event of the person becoming insolvent or making a composition or arrangement with his creditors, or
  - b) Where the insured person is a company, in the event of a winding-up order being made or a resolution for a voluntary winding-up being passed with respect to the company or of a receiver or manager of the company's business or undertaking being duly appointed, or of possession being taken by or on behalf of the holders of any debentures secured by a floating charge of any property comprised in or subject to the charge, if, either before or after that event, any such liability is incurred by the insured person, his rights against the insurer under the contract in respect of the liability shall, notwithstanding anything to the contrary in any provision of law, be transferred to and vest in the third party to whom the liability was so incurred.
- 2) Where an order for the Administration of the estate of a deceased debtor is made according to the law of insolvency, then, if any debt provable in insolvency is owing by the deceased in respect of a liability to a third party against which he was insured under a contract of insurance in accordance with the provision of this Chapter, the deceased debtor's rights against the insurer in respect of that liability shall, notwithstanding anything to the contrary in any provision of law, be transferred to and vest in the person to whom the debt is owing.
- 3) Any condition in a policy issued for the purposes of this Chapter purporting either directly or indirectly to avoid the policy or to alter the rights of the parties there under upon the happening to the insured

person of any of the events specified in rule (a) or rule (b) of sub rule (1) or upon the making of an order for the Administration of the estate of a deceased debtor according to the law of insolvency shall be of no effect.

- 4) Upon a transfer under sub rule (1) or sub rule (2), the insurer shall be under the same liability to the third party as he would have been to the insured person, but:-
- a. If the liability of the insurer to the insured person exceeds the liability of the insured person to the third party, nothing in this Chapter shall affect the rights of the insured person against the insurer in respect of the excess, and
  - b. If the liability of the insurer to the insured person is less than the liability of the insured person to the third party, nothing in this Chapter shall affect the rights of the third party against the insured person in respect of the balance.

**Objects and Reasons:-** Rule 7.4.6 provides that in event of the insured becoming insolvent any liability incurred by the insured person and his rights against the insurer will be transferred to and vest in the third party to whom the liability was so incurred.

#### **7.4.7 Duty to give information as to insurance:-**

- 1) No person against whom a claim is made in respect of any liability referred to in rule (b) of sub rule (1) of rule 7.4.3 shall on demand by or on behalf of the person making the claim refuse to state whether or not he was insured in respect of that liability by any policy issued under the provisions of this Chapter, or would have been so insured if the insurer had not avoided or cancelled the policy, nor shall he refuse, if he was or would have been so insured, to give such particulars with respect to that policy as were specified in the certificate of insurance issued in respect hereof.
- 2) In the event of any person becoming insolvent or making a composition or arrangement with his creditors or in the event of an order being made for the Administration of the estate of a deceased person according to the law of insolvency, or in the event of a winding-up order being made

**Duties to  
give  
information  
as to  
insurance**

or a resolution for a voluntary winding-up being passed with respect to any company or of a receiver or manager of the company's business or undertaking being duly appointed or of possession being taken by or on behalf of the holders of any debentures secured by a floating charge or any property comprised in or subject to the charge, it shall be the duty of the insolvent debtor, personal representative of the deceased debtor or company, as the case may be, or the official assignee or receiver in insolvency, trustee, liquidator, receiver or manager, or person in possession of the property to give at the request of any person claiming that the insolvent debtor, deceased debtor or company is under such liability to him as is covered by the provision of this Chapter, such information as may reasonably be required by him for the purpose of ascertaining whether any rights have been transferred to and vested in him by rule 7.4.6 and for the purpose of enforcing such rights, if any; and any such contract of insurance as purports whether directly or indirectly to avoid the contract or to alter the rights of the parties there under upon the giving of such information in the events aforesaid, or otherwise to prohibit or prevent the giving thereof in the said events, shall be of no effect.

- 3) If, from the information given by any person in pursuance of sub rule (2) or otherwise, he has reasonable ground for supporting that there have or may have been transferred to him under this Chapter rights against any particular insurer, that insurer shall be subject to the same duty as is imposed by the said sub-rule on the persons there in mentioned.
- 4) The duty to give the information imposed by this section shall include a duty to allow all contracts of insurance, receipts for premiums, and other relevant documents in the possession or power of the person on whom the duty so imposed to be inspected and copies thereof to be taken.

**Objects and Reasons:-** Rule 7.4.7 prescribes that it is the duty of the insured to give information relating to the insurance on demand by or on behalf of the person making the claim for compensation.

**7.4.8 Settlement between insurers and insured persons:-**

1. No settlement made by an insurer in respect of any claim which might be made by a third party in respect of any liability of the nature referred to in rule (b) of sub rule (1) of rule 7.4.3 shall be valid unless such third party is a part of the settlement.
2. Where a person who is insured under a policy issued for the purpose of this Chapter has become insolvent, or where, if such insured person is a company, a winding-up order has been made or a solution for a voluntary winding-up has been passed with respect to the company, no agreement made between the insurer and the insured person after the liability has been incurred to a third party and after the commencement of the insolvency or winding-up, as the case may be, nor any waiver, assignment or other disposition made by or payment to the insured person after the commencement aforesaid shall be effective to defeat the rights transferred to the third party under this Chapter, but those rights shall be the same as if no such agreement, waiver, assignment or disposition or payment has been made.

**Settlement  
between  
insurers and  
insured  
persons**

**Objects and Reasons:-** Rule 7.4.8 lays down that any settlement made by the insurer in respect of any claim which may be the third party will not be valid unless the third party is a party to the claim.

**7.4.9 Saving in respect of rules 7.4.6, 7.4.7 and 7.4.8:-**

- 1) For the purpose of rule 7.4.6, 7.4.7 and 7.4.8 a reference to liabilities to third parties in relation to a person insured under any policy of insurance shall not include a reference to any liability of that person in the capacity of insurer under some other policy of insurance.
- 2) The provisions of rule 7.4.6., 7.4.7 and 7.4.8 shall not apply where a company is wound-up voluntarily merely for the purpose of reconstruction or of an amalgamation with another company.

**Saving in  
respect of  
rule 7.4.6,  
7.4.7 and  
7.4.8**

**Objects and Reasons:-** Clause 7.4.9 lays down that the liability of the insurer will be only in respect of that particular policy alone and not in respect of any other policy of insurance.

#### **7.4.10 Insolvency of insured persons not to affect liability of insured or claims by third party:-**

Where a certificate of insurance has been issued to the person by whom a policy has been effected, the happening in relation to any person insured by the policy of any such event as is mentioned in sub rule (1) or sub rule (2) of section 7.4.6 shall, notwithstanding anything contained in this Chapter, not affecting any liability of that person of the nature referred to in clause (b) of sub rule (1) of section 7.4.3; but nothing in this section shall affect any rights against the insurer conferred under the provisions of section 7.4.6, 7.4.7 and 7.4.8 on the person to whom the liability was incurred.

**Insolvency of insured person not to affect liability of insured or claims by third party**

**Objects and Reasons:-** Clause 7.4.10 provides that the insolvency of the insured will not affect the liability of the insured or affect the claims of third party or the rights against the insurer.

#### **7.4.11 Effect of death on certain causes of action:-**

Notwithstanding anything contained in section 306 of the Indian Succession Act, 1925 (39 of 1925) of the death of a person in whose favor a certificate of insurance had been issued, if it occurs after the happening of an event which has given rise to a claim under the provisions of this Chapter, shall not be a bar to the survival of any cause of action arising out of the said event against his estate or against the insurer.

**Effect of death on certain causes of action**

**Objects and Reasons:-** Rule 7.4.11 makes it clear that in the event of the death of the insured after the happening of an accident in which his Inland Vessel was involved, the rights of third party will not be barred against the insured or his excise.

#### **7.4.12 Effect of certificate of insurance:-**

When an insurer has issued a certificate of insurance in respect of a contract of insurance between the insurer and the insured person, then:-

**Effect of Certificate of Insurance**



- a) If and so long as the policy described in the certificate has not been issued by the insurer to the insured, the insurer shall, as between himself and any other person except the insured, be deemed to have issued to the insured person a policy of insurance conforming in all respects with the description and particulars stated in such certificate; and
- b) If the insurer has issued to the insured the policy described in the certificate, but the actual terms of the policy are less favorable to persons claiming under or by virtue of the policy against the insurer either directly or through the insured than the particulars of the policy as stated in the certificate, the policy shall, as between the insurer and any other person except the insured, be deemed to be in terms conforming in all respects with the particulars stated in the said certificate.

**Objects and Reasons:-** Rule 7.4.12 provides that where the insurer has issued a certificate of insurance, and the policy of insurance has not been issued, then the policy to be issued be deemed to be in terms confirming in all respects to the particulars mentioned in the certificate of insurance.

#### **7.4.13 Transfer of certificate of insurance:-**

- 1) Where a person in whose favor the certificate of insurance has been issued in accordance with the provisions of this Chapter transfer to another person the ownership of the Inland Vessel in respect of which such insurance was taken together with the policy of insurance relating thereto, the certificate of insurance and the policy described in the certificate shall be deemed to have been transferred in favor of the person to whom the Inland Vessel is transferred with effect from the date of its transfer.

#### **Transfer of Certificate of Insurance**

**Explanation:-** For the removal of doubts, it is hereby declared that such deemed transfer shall include transfer of rights and liabilities of the said certificate of insurance and policy of insurance.

- 2) The transferee shall apply within fourteen days from the date of transfer in the prescribed form to the insurer for making necessary changes in regard to the fact of transfer in the certificate of insurance and the policy described in the certificate in his favor and the insurer shall make the necessary changes in the certificate and the policy of insurance in regard to the transfer of insurance.

**Objects and Reasons:-** Rule 7.4.13 lays down that when the certificate of registration is transferred from one person to another, then the policy of insurance in respect of that Inland Vessel is also deemed to have been transferred to that other person from the date on which the ownership of the Inland Vessel stands transferred.

**7.4.14 Production of certain certificates, license, and a certificate of registration granted under section 19F of the Inland Vessels Act, 1917 in certain cases:-**

**Production  
of certain  
certificates**

- 1) The Master or person in-charge of an Inland Vessel shall, on being so required by a police officer in uniform authorized in this behalf by the State Government, produce:—
  - a) The certificate of insurance;
  - b) The certificate of registration;
  - c) The certificate granted under Chapter III of the Indian Vessels Act, 1917; and
  - d) The certificate of survey granted under Section 9 of the Inland Vessels Act, 1917.
- 2) If, where owing to the presence of an Inland Vessel in an Inland Water an accident occurs involving death or bodily injury to another person, the Master of the Inland Vessel does not at the time produce the certificate, a certificate granted under Chapter III of the Inland Vessels Act 1917 and a certificate of registration granted under section 19F of the Inland Vessels Act 1917 referred to in sub rule (1) of the police officer, he shall produce the said certificates, license and a certificate of registration granted under section 19F of the Inland Vessels Act 1917 at the police station at which he makes the report required by rule. 7.2

- 3) No person shall be liable to conviction under sub rule (1) or sub rule (2) by reason only of the failure to produce the certificate of insurance if, within seven days from the date on which its production was required under sub rule (1), or as the case may be, from the date of occurrence of the accident, he produces the certificate at such police station as may have been specified by him to the police officer who required its production or, as the case may be, to the police officer at the site of the accident or to the officer-in-charge of the police station at which he reported the accident:  
Provided that except to such extent and with such modifications as may be prescribed, the provisions of this sub-section shall not apply to the Master of the "public service vessel or goods service vessel".
- 4) The owner of an Inland Vessel shall give such information as he may be required by or on behalf of a police officer empowered in this behalf by the State Government to give for the purpose of determining whether the Inland Vessel was or was not being manned in contravention of sub rule 7.4.2 and on any occasion when the Master of the Vessel was required under this section to produce his certificate of insurance.
- 5) In this section, the expression – produce his certificate of insurance means produce for examination the relevant certificate of insurance or such other evidence as may be prescribed that the Inland Vessel was not being manned in contravention of sub rule 7.4.2
- 6) As soon as any information regarding any accident involving death or bodily injury to any person is recorded or report under this section is completed by a police officer, the officer-in-charge of the police station shall forward a copy of the same within thirty days from the date of recording of information or, as the case may be, on completion of such report to the Claims Tribunal having jurisdiction and a copy thereof to the concerned insurer, and where a copy is made available to the owner, he shall also within thirty days of receipt of such report, forward the same to such Claims Tribunal and insurer.

**Objects and Reasons:-** Sub rule 7.4.14 makes it compulsory on the part of the Master of an Inland Vessel involved in accident, to produce the certificate of registration and insurance, the certificate of survey granted under section 9 of the Inland Vessels Act, 1917 and a certificate of registration granted under section 19F of the Inland Vessels Act 1917 and a certificate granted under Chapter III of the Inland Vessels Act 1917 without delay. It also provides that the police officer who makes a report of accident shall send a copy of the report to the Accident Claims Tribunal.

**7.4.15 Production of certificate of insurance on application for authority to use Inland Vessel:-**

A State Government may make rules requiring the owner of any Inland Vessel when applying whether by payment of a tax or otherwise for authority to use the Inland Vessel in an Inland Waterway to produce such evidence as may be prescribed by those rules to the effect that either:-

- a) On the date when the authority to use the Inland Vessel comes into operation there will be in force the necessary policy of insurance in relation to the use of the Inland Vessel by the applicant or by other persons on his order or with his permission, or
- b) The Inland Vessel is an Inland Vessel to which rule 7.4.2 does not apply.

**Objects and Reasons:-** Rule 7.4.15 empowers the State Government to make rules to require production of certificate of insurance of an Inland Vessel at the time of payment of taxes and to have a valid certificate of insurance before the Inland Vessel prior obtaining a certificate of registration granted under section 19F of the Inland Vessels Act, 1917.

**7.4.16 Duty to furnish particulars of Inland Vessel involved in accident:-**

A registering authority or the officer-in-charge of a police station shall, if so required by a person who alleges that he is entitled to claim compensation in respect of an accident arising out of the use of an Inland Vessel, or if so required by an insurer against whom a claim has been made in respect of any Inland Vessel, furnish to that person or to

**Production  
of certificate  
of insurance  
on  
application  
for  
authority to  
use inland  
vessel**

**Duty to  
furnish  
particulars  
of Inland**

that insurer, as the case may be, on payment of the prescribed fee any information at the disposal of the said authority or the said police officer relating to the identification mark send other particulars of the Inland Vessel and the name and address of the person who was using the Inland Vessel at the time of the accident or was injured by it and the property, if any, damaged in such form and within such time as the State / Central Government may prescribe.

**Objects and Reasons:-** Rule 7.4.16 lays down that it is the duty of the police officer registering accident case and the registering authority to furnish to the person who alleges that he is entitled to claim compensation all such particulars in such form and within such time as the State / Central Government may prescribe.

**Vessels  
involved in  
accident**

**7.4.17 Special provisions as to compensation in case of hit and run Inland Vessel accident:-**

- 1) For the purpose of this Rule, rule 7.4.18 and sub rule 7.4.19:-
  - a) "grievous hurt" shall have the same meaning as in the Indian Penal Code, 1860 (45 of 1860);
  - b) Hit and run Inland Vessel accident means an accident arising out of the use of a Inland Vessel the identity whereof cannot be ascertained in spite of reasonable efforts for the purpose;
  - c) Scheme means the scheme framed under rule 7.4.19
- 2) Notwithstanding anything contained in the General Insurance Business (Nationalization) Act, 1972 (57 of 1972) or any other law for the time being in force or any instrument having the force of law, the General Insurance Corporation of India formed under section 9 of the said Act and the insurance companies for the time being carrying on general insurance business in India shall provide for paying in accordance with the provisions of this Act and the scheme, compensation in respect of the death of, or grievous hurt to, persons resulting from hit and run Inland Vessel accidents.
- 3) Subject to the provisions of Motor Vehicles Act, 1988 and the scheme, there shall be paid as compensation:-

**Special  
provisions  
as to  
compen-  
sation in  
case of hit  
and run  
inland  
vessel  
accident**

- a. In respect of the death of any person resulting from a hit and run Inland Vessel accident, a fixed sum of fifty thousand rupees;
  - b. In respect of grievous hurt to any person resulting from a hit and run Inland Vessel accident, a fixed sum of twenty-five thousand rupees.
- 4) The provisions of sub-rule (1) of rule 7.5.2 shall apply for the purpose of making applications for compensation under this section as they apply for the purpose of making applications for compensation referred to in that sub-section.

**Objects and Reasons:-** Rule 7.4.17 provides for framing of a scheme by the Central Government for the payment of compensation in – hit and run cases. It also lays down the amount of compensation in respect of the death and also in respect of grievous hurt.

**7.4.18 Refund in certain cases of compensation paid under rule 7.4.17:-**

- 1) The payment of compensation in respect of the death of, or grievous hurt to, any person under rule 7.4.17 shall be subject to the condition that if any compensation (hereinafter in this sub-section referred to as the other compensation) or other amount in lieu of or by way of satisfaction of a claim for compensation is awarded or paid in respect of such death of grievous hurt under any other provision of this Act or any other law or otherwise so much of the other compensation or other amount aforesaid as is equal to the compensation paid under rule 7.4.17 shall be refunded to the insurer.
- 2) Before awarding compensation in respect of an accident involving the death of, or bodily injury to, any person arising out of the use of a Inland Vessel under any provision of Motor Vehicles Act, 1988 (other than rule 7.4.17 1 above) or any other law, the Tribunal Court or other authority awarding such compensation shall verify as to whether in respect of such death or bodily injury compensation has already been paid under rule 7.4.17 or an application for payment of compensation is pending under that section, and such Tribunal, Court or other authority shall:-

**Refund in  
certain  
cases of  
compensat-  
ion paid  
under rule  
7.4.17**

- a) If compensation has already been paid under rule 7.4.17, direct the person liable to pay the compensation awarded by it to refund to the insurer, so much thereof as is required to be refunded in accordance with the provisions of sub-rule (1);
- b) If an application for payment of compensation is pending under rule 7.4.17 forward the particulars as to the compensation awarded by it to the insurer.

**Explanation:-** For the purpose of this sub-section, an application for compensation under rule 7.4.17 shall be deemed to be pending:-

- i. If such application has been rejected, till the date of the rejection of the application, and
- ii. In any other case, till the date of payment of compensation in pursuance of the application.

**Objects and Reasons:-** Rule 7.4.18 seeks to provide that when compensation is awarded in a case where compensation under rule 7.4.17 has already been paid then so much of the compensation paid as per rule 7.4.17 shall be refunded to the insurer.

**7.4.19 Scheme for payment of compensation in case of hit and run Inland Vessel accidents:-**

- 1) The Central Government may, by notification in the Official Gazette, make a scheme specifying, the manner in which the scheme shall be administered by the General Insurance Corporation, the form, manner and the time within which applications for compensation may be made, the officers or authorities to whom such applications may be made, the procedure to be followed by such officers or authorities for considering and passing orders on such applications, and all other matters connected with, or incidental to, the Administration of the scheme and the payment of compensation.
- 2) A scheme made under sub-rule (1) may provide that:-
  - a) A contravention of any provision thereof shall be punishable with imprisonment for such term as may be specified but in no case exceeding three months, or with fine which may extend to such amount as may be specified but in no case exceeding five hundred rupees or with both;

**Scheme for  
payment of  
compensa-  
tion in case  
of hit and  
run inland  
vessel  
accidents**

- b) The powers, functions or duties conferred or imposed on any officer or authority by such scheme may be delegated with the prior approval in writing of the Central Government, by such officer or authority to any other officer or authority;

**Objects and Reasons:-** Rule 7.4.19 empowers the Central Government to make scheme for payment of compensation in – hit and run accident cases detailing the procedure for making claim, the authorities to whom the claim should be made, etc.

#### **7.4.19 (A) Option to file claim in certain cases.**

Where a person is entitled to claims compensation under sub-rule 7.3.1 he shall file the claim under either of the said sub-rule 7.3.1.

**Option to  
file claim  
in certain  
cases**

#### **7.5 Claims Tribunals:-**

##### **7.5.1. Procedure and powers of Claims Tribunals:-**

- 1) In holding any inquiry, the Claims Tribunal may, subject to any rules that may be made in this behalf, follow such summary procedures as it thinks fit.
- 2) The Claims Tribunal shall have all the powers of a Civil Court for the purpose of taking evidence on oath and of enforcing the attendance of witnesses and of compelling the discovery and production of documents and material objects and for such other purposes as may be prescribed; and the Claims Tribunal shall be deemed to be a Civil Court for all the purposes of section 195 and Chapter XXVI of the Code of Criminal Procedure, 1973.
- 3) Subject to any rules that may be made in this behalf, the Claims Tribunal may, for the purpose of adjudicating upon any claims for compensation, choose one or more persons possessing special knowledge of any matter relevant to the inquiry to assist it in holding the inquiry.

**Procedure  
and powers  
of claim  
tribunal**

**Objects and Reasons:-** Rule 7.5.1 lays down the procedure to be followed by the Claims Tribunal in setting claims compensation and the powers of the Claims Tribunal.



**7.5.2 Impleading insurer in certain cases:-**

Where in the course of any inquiry, the Claims Tribunal is satisfied that:-

- a) There is collusion between the person making the claim and the person against whom the claim is made, or
- b) The persons against whom the claim is made has failed to contest the claim, it may, for reasons to be recorded in writing, direct that the insurer who may be liable in respect of such claim, shall be impleaded as a part to the proceeding and the insurer so impleaded shall thereupon have, without prejudice to the provisions contained in sub-rule (2) of rule 7.4.5, the right to contest the claim on all or any of the grounds that are available to the person against whom the claim has been made.

**Impleading  
insurer in  
certain  
cases**

**7.5.3 Award of interest where any claim is allowed:-**

Where any Claims Tribunal allows a claim for compensation made under Motor Vehicles Act, 1988, such Tribunal may direct that in addition to the amount of compensations impel interest shall also be paid at such rate and from such date not earlier than the date of making the claim as it may specify in this behalf.

**Award of  
interest  
where any  
claim is  
allowed**

**Objects and Reasons:-** Rule 7.5.2 empowers the Claims Tribunal to order that simple interest at such rates as it thinks fit shall also be paid along with the award of compensation.

**7.5.4 Award of compensatory costs in certain cases:-**

- 1) Any Claims Tribunal adjudicating upon any claim for compensation under Motor Vehicles Act, 1988, may in any case where it is satisfied for reasons to be recorded by it in writing that:-

- a) The policy of insurance is void on the ground that it was obtained by representation of fact which was false in any material particular, or
- b) Any party or insurer has put forward a false or vexatious claim or defense such Tribunal may make an order for the payment, by the party who is guilty of misrepresentation or by whom such claim

**Award of  
compensa-  
tory costs in  
certain  
cases**

or defense has been put forward of special costs by way of compensation to the insurer or, as the case may be, to the party against whom such claim or defense has been put forward.

- 2) No Claims Tribunal Shall pass an order for special costs under sub-rule (1) for any amount exceeding one thousand rupees.
- 3) No person or insurer against whom an order has been made under this section shall, by reason thereof be exempted from any criminal liability in respect of such misrepresentation, claim or defense as its referred to in sub-rule (1).
- 4) Any amount awarded by way of compensation under this section in respect of any misrepresentation, claim or defense, shall be taken into account in any subsequent suit for damages for compensation in respect of such misrepresentation, claim or defense.

**Objects and Reasons:-** Rule 7.5.3 seeks to empower the Claims Tribunals to award special compensatory costs where in certain cases it is found that there has been misrepresentation of case or vexatious to claims or defense.

#### **7.5.5 Appeals:-**

- 1) Subject to the provisions of sub-rule (2) of section 19P of the Act, any person aggrieved by an award of a Claims Tribunal may, within ninety days from the date of the award, prefer an appeal to the High Court:-  
Provided that no appeal by the person who is required to pay any amount in terms of such award shall be entertained by the High Court, unless she has deposited with it twenty-five thousand rupees or fifty percent, of the amount so awarded, whichever is less, in the manner directed by the High Court:  
Provided further that the High Court may entertain the appeal after the expiry of the said period of ninety days, if it is satisfied that the appellant was prevented by sufficient cause from preferring the appeal in time.
- 2) No appeal shall lie against any award of a Claims Tribunal if the amount in dispute in the appeal is less than ten thousand rupees.

#### **Appeals**

**Objects and Reasons:-** Rule 7.5.4 makes provision for appeal to High Court by the aggrieved against the order of Claim Tribunal and where the person aggrieved is the person who has to pay the compensation such person shall deposit 50 percent of the amount awarded as directed by the High Court.

**7.5.6 Recovery of money from insurer as arrear of land revenue:-**

Where any amount is due from any person under an award, the Claim Tribunal may, on an application made to it by the person entitled to the amount, issue a certificate for the amount to the Collector and the Collector shall proceed to recover the same in the same manner as an arrear of land revenue.

**Recovery of  
money from  
insurer as  
arrear of  
land  
revenue**

**Objects and Reasons:-** Rule 7.5.5 lays down that any money due from any person under an award by the Claim Tribunal may be recovered by the Collector as arrears of land revenue.

**7.5.7 Bar on jurisdiction of Civil Courts:-**

Where any Claims Tribunal has been constituted for any area, no Civil Court shall have jurisdiction to entertain any question relating to any claim for compensation which may be adjudicated upon by the Claim Tribunal for that area, and no injunction in respect of any action taken or to be taken by or before the Claims Tribunal in respect of the claim for compensation shall be granted by the Civil Court.

**Bar on  
jurisdiction  
of civil  
courts**

**Objects and Reasons:-** Rule 7.4.6 bars the jurisdiction of Civil Courts where any Claims Tribunal has been constituted.

**CHAPTER - VIII****REMOVAL OF OBSTRUCITON AND SIMILAR HAZARDS IN NAVIGATION****8.1 Raising of or removal of wreck impeding navigation etc:-**

- 8.1.1 If any mechanically propelled vessel or other vessel is wrecked, stranded or sunk in any inland water is or is likely to become obstruction, impediment or danger to the safe and convenient navigation or use of the inland water or the landing place or embankment or part thereof, any officer empowered by the State Government by notification in the Official Gazette in this behalf (hereinafter in the Chapter referred to as competent officer) shall cause the vessel to be raised, removed, blown up or otherwise destroyed as the circumstances may warrant.
- 8.1.2 If any property recovered by a competent officer acting under sub-rule 8.1.1 is unclaimed or the person claiming it fails to pay reasonable expenses incurred by the competent officer under that sub-section and a further sum of twenty-five percent, of the amount of such expense, the competent officer may sell the property by public auction, if the property is of a perishable nature, forthwith, and it is not of a perishable nature, at any time not less than two months after the recovery thereof.
- 8.1.3 The expense and further sum aforesaid shall be payable to the competent officer out of the sale proceeds of the property and the balance shall be paid to the person entitled to the property recovered, or if no such person appears and claims the balance, shall be held in deposit for payment, without interest, to the person thereafter establishing his right thereto;  
Provided that the person makes his claim within three years from the date of sale.
- 8.1.4 Where the sale proceeds of the property are not sufficient to meet the expenses and further sum aforesaid, the owner of the vessel at the time the vessel was wrecked, stranded or sunk shall be liable to pay the deficiency to the competent officer on demand, and if the deficiency be

**Raising /  
Removal of  
Wreck  
impeding  
Navigation**

not paid within the one month of such demand, the competent officer may recover the deficiency from such owner as if it were and arrear of land revenue.

## **8.2 Removal of obstruction in inland water:-**

- 8.2.1 The competent officer may remove, or cause to be removed any timber, raft or other thing, floating or being in any part of the inland water, which in his opinion, obstructs or impedes the free navigation thereof or the lawful use of any landing place or embankment or part thereof.
- 8.2.2 The owner of any such timber, raft or other thing shall be liable to pay the reasonable expenses of the removal thereof, and if such owner or any other person has without lawful excuse caused any such obstruction or impediment, or causes any public nuisance affecting or likely to affect such free navigation of Lawful use, he shall also be punishable with fine which may extend to one rupees.
- 8.2.3 The Competent Officer or any magistrate having jurisdiction over the offences may cause any such nuisance to be abated.

### **Removal of Obstruction in Inland Water**

## **8.3 Recovery of expenses of removal:-**

If the owner of any such timber, raft or other thing, or the person who has caused any such obstruction, impediment or public nuisance, neglects to pay the reasonable expenses incurred in the removal thereof, within one week after demand of within fourteen days after such removal has been notified in the Official Gazette or in such other manner as the State Government may, be general or special order direct, the competent officer may cause such timber, raft or other thing or the materials of any public nuisance so removed, or so much thereof as may be necessary, to be sold by public auction and may retain all the expenses of such removal and sale out of the proceeds of the sale, and shall pay the surplus of such proceeds or deliver so much of the thing or materials so may remain unsold, to the person entitled to receive the same and if no such person appears, shall cause the same to be kept and deposited in such manner as the State Government directs, and may, if necessary, from time to time, realize the expenses of keeping the same, together with the expenses of sale, or further sale of so much of the thing or materials as may remain unsold.

### **Recovery of Expenses of Removal**

**8.4 Removal of lawful obstruction:-**

- 8.4.1 If any obstruction or impediment to the navigation of any inland water has been lawfully made or has become lawful by reason of the long continuance of such obstruction or impediment or otherwise, the competent Officer shall report the same for the information of the State Government and shall, with the sanction of the State Government, cause the same to be removed or altered, making reasonable compensation to the person suffering damage by such removal or alternation.
- 8.4.2 Any dispute arising out of or concerning such compensation shall be determined according to the law relating to like disputes in the case of land required for public purpose.

**Removal of  
Lawful  
Obstruction****8.5 Fouling of Government moorings:-**

- 8.5.1 If any mechanically propelled vessel hooks or gets fouled in any of the or moorings laid down by or by the authority of the State Government in any part of inland water, the master of such vessel shall not, nor shall any other person, except in the case of emergency, lift the buoy or mooring for the purpose of unhooking or getting clear from the same without the assistance of the competent officer.
- 8.5.2 The Competent Officer immediately on receiving information of such accident shall assist and superintend the clearing of such vessel and the master of the vessel shall, on demand, pay such reasonable expenses as may be incurred in clearing the same.
- 8.5.3 Any master or other person offending against the provisions of the section shall, for every offence, be punishable with fine which may extend to one hundred rupees.

**Fouling of  
Govern-  
ment  
Moorings**

# **ANNEXURE – 1**

## **SCHEDULES**

# **Schedule - I**

## **CONSTRUCTION RULES**

### **FOR INLAND VESSELS**

**Construction and other related Rules of IRS and / or any IACS Classification Society  
and / or IWAI model rules as applicable may be accepted for Inland Vessels**



**PART A**  
**GENERAL HULL**  
**REQUIREMENTS**

**Chapter 1**  
**General, Definitions, Documentation**  
**Contents**

**Section**

- 1 General
- 2 Definitions
- 3 Documentation

**Section 1**

**General**

**1.1 Scope**

- 1.1.1 The Rules in this part apply to all-welded, single hull steel vessels of normal form proportions and speed for operation in inland waterways.
- 1.1.2 For additional class notions relating to various vessel types, requirements as per Pt. 5 are to be complied with.
- 1.1.3 Vessels of unconventional forms and proportions or intended for carriage of cargoes not covered by the Rules or to be engaged in special service will receive individual consideration based on the general principles of the rules. In these cases, however additional calculations and / or model testing may be required to be carried out and submitted for approval
- 1.1.4 Proposals for use of alternative materials e.g. aluminum, wood, etc. for some parts of the vessel shall receive special consideration.

**1.2 Equivalence**

- 1.2.1 Alternative arrangements, scantlings and equipment may be accepted provided they can be shown to be equivalent to the overall safety and strength standard of the Rules. Direct calculations for the derivation of the scantlings as an alternative to those derived by the Rule formulae, may be accepted on special consideration. The calculation procedure and the assumptions made are to be submitted for approval.

**1.3 National Rules**

- 1.3.1 While the Rules cover requirements for the classification of vessels, the attention of all concerned is drawn to requirements of various local or national Rules, Codes and Recommendations which the vessel may also have to comply with.

**1.4 Load line and stability**

- 1.4.1 All vessels will be assigned class only after it has been demonstrated that their intact / damage stability and load line requirements (where applicable) are in compliance with the standards laid down by the local or National Statutory Authority

**1.5 Assumptions**

- 1.5.1 It is assumed that significant dynamic excitation of major orders from propellers and machinery do not fall close to any natural frequency of the hull.
- 1.5.2 It is assumed that the vessels will be competently handled and loaded as per the approved loading manual

**Section 2****Definitions****2.1 Principal particulars**

- 2.1.1 The forward perpendicular, F. P., is the perpendicular drawn at the intersection of the maximum load waterline with the fore side of the stern.

In vessels with unusual bow arrangement the position of the F. P. will be specially considered.

- 2.1.2 The after perpendicular, A. P., is the perpendicular drawn at the intersection of the maximum load waterline with the after side of the rudder post or the centerline of the rudder stock if there is no rudderpost.

In vessels with unusual stern arrangement the position of the A. P. will be specially considered.

- 2.1.3 Rule length, L, is the distance, (m), between the forward and after perpendiculars. However L is to be not less than 96 percent, and need not be greater than 97 percent of the extreme length on the maximum load waterline.

In vessels with unusual bow and / or stern arrangement the Rule length, L, will be specially considered.

- 2.1.4 "Amidships" is at 0.5L of the F. P.

- 2.1.5 Breadth, B, is the greatest moulded breadth (m).

- 2.1.6 Depth, D, is the moulded depth (m), measured amidships from top to the keel to the moulded deck line of the uppermost continuous deck at side. When an uppermost continuous deck at side. When a rounded gunwale is arranged the depth is to be measured to the continuation of the moduled deckline.

2.1.7 Draught, T, is the moduled draught amidships corresponding to the maximum load waterline, (m).

2.1.8 The block co-efficient,  $C_b$ , is the moulded block co-efficient calculated as follows:-

$$C_b = \frac{\text{moulded displacement (m}^3\text{) at draught T}}{LBT}$$

2.1.9 Speed, V, is the maximum service speed in knots on draught T.

## 2.2 Structural Terms

2.2.1 The general terms used in the Rules for various structural parts of the vessels are defined as under:-

- *Strength Deck*:- In general the uppermost continuous deck. Where a superstructure deck has within 0.4L amidships, a continuous length equal to or greater than  $(1.5 B + 3H)$ , it is to be regarded as the strength deck instead of the covered part of the uppermost continuous deck. (H is the height of the superstructure, (m))
- *Superstructure*:- A decked structure on freeboard deck extending from side to side of the vessel or with the side plating not inboard of shell plating by more than 4 percent of the breadth B.
- *Deckhouse*:- A decked structure above the freeboard deck with the side plating being inboard of the shell plating by more than 4 percent of the breadth B.
- *Bottom Structure*:- Shell plating with stiffeners and girders below the upper turn of bilge and all other elements below and including the inner bottom plating in case of the double bottom. Sloping hopper tank top is to be regarded as a bulkhead.
- *Side Structure*:- Shell plating with stiffeners and girders between the upper turn of bilge and the uppermost continuous deck at side. A rounded gunwale is included in the side structure.
- *Deck Structure*:- Deck plating with stiffeners, girders, and supporting pillars.
- *Girder*:- A collective term for the primary supporting members, other terms include:-
  - Transverses – transverse girders under the deck.
  - Web frames – side vertical girders.
  - Hatch end beams – transverse deck girders at the ends of the hatch.
  - Stringers – horizontal girders.
  - Cross-ties – girders connecting two vertical girders in a deep tank.
  - Floor – bottom transverse girders.
- *Stiffener*:- A collective term for secondary supporting members; other terms being:-
  - Frames.

- Bottom, inner bottom, side or deck longitudinal.
- Reverse frame – transverse stiffener on the inner bottom.
- Horizontal or vertical bulkhead stiffeners.
- Other terms are defined in the appropriate Chapters.

### **2.3 Material factor**

- 2.3.1 Material factors, k, a factor depending on material strength is defined in Ch. 2

## **Section 3**

### **Documentation**

#### **3.1 General**

- 3.1.1 Documentation is to be submitted as per the following paragraphs. In case of certain vessel type's additional documentation may be required as per Pt. 5
- 3.1.2 The documents should be submitted in triplicate, one copy of which shall be returned.

#### **3.2 Plans for information**

- 3.2.1 The following supporting plans and calculations are to be submitted for information:-
- General arrangement
  - Tank plan
  - Capacity plan
  - Lines plan and Hydrostatic curves or tables
  - Docking plan

#### **3.3 Additional information**

- 3.3.1 The following additional information is to be submitted as necessary for strength calculations:-
- Maximum values of still water bending moments and shear forces.
  - Light vessel weight and its longitudinal distribution
  - Bon jean data.
  - Stowage factor and angle of repose of bulk cargoes to be carried.
  - Masses and unbalanced moments of heavy machinery components e.g. engines, cranes, winches etc.

#### **3.4 Plans for approval**

- 3.4.1 Plans as relevant are to be submitted for approval as indicated in Table 3.4.1. These should as far as practicable be complete in all necessary details.

### 3.5 Plans to be kept on board

- 3.5.1 A copy of the final approved loading manual and suitable scantling plans including details of corrosion control system; if any, are to be placed on board the vessel.
- 3.5.2 To facilitate the ordering of materials for repairs, plans showing the disposition and extent of high tensile steel and steel of grades other than Grade A, along with the information relating to their physical and mechanical properties, recommended working, treatment and welding procedures etc. are to be placed on board.

**Table 3.4.1 : Plans for approval**

| <b>Plan</b>  | <b>Including information on</b>   |
|--|---|
| Loading manual   | Details of loading in all contemplated loading conditions and resulting SWBM, SF & Torsional Moments (TM)<br>Design values of SWBM, SF & TM   |
| Mid-ship section<br>Other transverse sections<br>Longitudinal sections & decks<br>Shell expansion & framing plan | Main particulars (L, B, D, T, C <sub>b</sub> , V)<br>Equipment specification<br>Complete class notation applied for<br>Spacing of stiffeners<br>Deck loads, if other than those specified in the Rule<br>Opening on the deck<br>Opening on the shell<br>Material grades |
| Double bottom  | Indication of access<br>Height and location of overflows<br>Loading on Inner bottom   |
| Water tight sub-division bulk heads & Water tight tunnels  | Openings and their closing appliances   |
| Aft-end structure  | Propeller outline   |
| Stern frame or stern post<br>Propeller shaft brackets<br>Aft peak tank   | Propeller thrust<br>Structural details in way of rudder and propeller bearings<br>Height and location of overflows  |
| Engine room structure<br>Engine and thrust block seating   | Type, power and r. p. m. of propulsion machinery<br>Weight of machinery, boilers, etc.  |
| For-end construction<br>Fore peak tank   | Openings on non-water tight bulkheads and diaphragm plates<br>Height and location of overflows  |

|   |  |
|---|--|
| Oil tight / water tight and partition bulkheads in cargo tanks, ballast tanks and deep tanks                      | Intended tank contents & their densities<br>Height and location of overflow / air pipes<br>Tanks intended to be partially filled<br>Corrosion protection: if any |
| Superstructures, deckhouses and machinery casings   | Height of sills from deck and closing appliances for companion ways  |
| Hatchways<br>Hatch covers   | Position and type<br>Loads if different from those specified in the rules<br>Sealing and securing arrangement, spacing of bolts or wedges                        |
| Rudder, stock and tiller<br>Steering gear arrangement   | Speed of the vessel (ahead & astern)<br>Material of bearing, coupling bolts, stock and the locking device<br>Rudder carrier                                      |
| Mast & derrick posts<br>Support structure for masts, derrick posts & cranes                                       | Derrick length and loading<br>Dimensions and positions of stays and shrouds<br>Quality of material   |
| Testing plan of tanks & bulkheads   |  |
| Welding details   |  |
| Notes:-<br>1) See Chapter 5, Section 6.<br>2) One drawing may contain more than one of the items from each group. |  |

**End of the Chapter**

**Chapter 2**  
**Materials of Construction**  
**Contents**

**Section**

- 1 General
- 2 Corrosion Protection
- 3 Deck

**Section 1**

**General**

**1.1 Scope**

- 1.1.1 The Rules relate, in general, to the construction of steel Vessels, Consideration will however be given to the use of other materials also.
- 1.1.2 The materials used in the construction of the vessel are to be manufactured and tested in accordance with the requirement of Pt. 2. 'Materials' of the Rules and Rules for the Construction and Classification of Steel Vessels (Main Rules). Materials for which provision is not made may be accepted, provided that they comply with an approved specification and such tests as may be considered necessary.

**1.2 Steel**

- 1.2.1 Ordinary hull structural steel is a hull structural steel with a minimum yield stress of 235 (N/mm<sup>2</sup>) and a tensile strength generally in the range of 400-490 (N/mm<sup>2</sup>).  
For ordinary hull structural steel the material factor 'k' is to be taken as 1.0.
- 1.2.2 Steels having a yield stress of 265 (N/mm<sup>2</sup>) and higher, are regarded as higher tensile steels. Where higher tensile steel is used, the hull girder section modulus and the local scantlings may be reduced in accordance with the relevant requirements of the Rules.  
For this purpose, a material factor 'K', is to be taken as follows:-  
K = 0.78 for steel with a minimum yield stress of 315 (N/mm<sup>2</sup>)  
K = 0.72 for steel with minimum yield stress of 355 (N/mm<sup>2</sup>)
- 1.2.3 Where steel castings or forgings are used for stern frames, rudder frames, rudder stocks, propeller shaft brackets and other major structural items, they are to comply with Pt. 2 'Materials' of Main Rules as appropriate.



### 1.3 Grades of steel

- 1.3.1 The vessels covered by these Rules are generally to be constructed in Grade 'A' steel. However, for materials of over 20 (mm) in thickness used in highly stressed areas, grades of steel with higher levels of notch toughness (Grades 'B', 'D' or 'E') may be required dependent on the stress pattern associated with its location.

### 1.4 Aluminum

- 1.4.1 Where seawater resisting aluminum alloys manufactured and tested in accordance with the requirements of Pt. 2 of the main rules are used for superstructures, deckhouses, hatch covers or other structural components, scantlings equivalent to steel are to be derived as follows:-

Plating Thickness,  $t_a - t_s \sqrt{K}$

Section modulus of stiffeners,  $Z_a - Z_s.k_a$  where

$t_a, t_s$  = plating thickness of aluminum and mild steel respectively,

$Z_a, Z_s$  = section modulus of aluminum and mild steel stiffeners respectively.

$K_a = \frac{235}{a}$

a

$a_a$  = 0.2% proof stress or 70% of the ultimate strength of the aluminum material, whichever is lesser ( $N/mm^2$ ).

- 1.4.2 The smaller modulus of elasticity of aluminum is to be taken into account, when determining the buckling strength of structural elements subjected to compression and the deflections, where relevant.

## Section 2

### Corrosion Protection

#### 2.1 General

- 2.1.1 All steel work, except inside tanks intended for the carriage of oil or bitumen, is to be protected against corrosion by application of suitable coating.

For protection required in salt water ballast spaces, See 2.5

For protection required in holds of dry bulk cargo carriers, see Pt. 5., Ch. 1.

For the protection required in tanks carrying chemicals or other special cargoes, see Pt. 5, Ch.3

- 2.1.2 Where bimetallic connections are made, measures are to be incorporated to preclude galvanic corrosion.

**2.2 Surface preparation, prefabrication primers, and paints or coatings**

- 2.2.1 Steelwork is to be cleared of mill scale and suitably cleaned before the application of surface paints and coatings. It is recommended that blast cleaning or other equally effective means be employed for this purpose.
- 2.2.2 Where a primer is used to coat steel after surface preparation and prior to fabrication, the composition of the coating is to be such that it will have no significant deleterious effect on subsequent welding work and that it is compatible with the paints or other coatings subsequently applied. Unless the primer used is type approved by IRS for this purpose, tests as detailed in Pt. 3, Ch. 2, Sec. 3 of the Main Rules are to be made to determine the influence of the primer coating on the characteristics of the weld.
- 2.2.3 Paints other coatings are to be suitable for the intended purpose in the locations where they are to be used. Unless previously agreed, to least two coats are to be applied.
- 2.2.4 The paints or coating is to be compatible with any previously applied primer, See 2.2.2.
- 2.2.5 Paints, varnishes and similar preparations having a nitrocellulose or other highly flammable base, are not to be used in accommodation or machinery spaces.
- 2.2.6 In vessels intended for the carriage of oil cargoes having a flash point below 60° C (Closed cup test), paint containing aluminum should not in general be used in cargo tanks, adjacent ballast tanks, cofferdams, pump rooms as well as on deck above the mentioned spaces, not in any other areas where cargo vapors may accumulate, unless it has been shown by appropriate tests that the paint to be used does not increase the incendive sparking hazard.

**2.3 Internal cathodic protection**

- 2.3.1 Impressed current cathodic protection systems are not permitted in any tank.
- When a cathodic protection system is to be fitted in tanks for the carriage of liquid cargo with flash point not exceeding 60° C, a plan showing details of the locations and attachment of anodes is to be submitted. The arrangements will be considered for safety against fire and explosion aspects only.
- 2.3.2 Particular attention is to be given to the locations of anodes in relation to the structural arrangements and openings of the tank.
- 2.3.3 Anodes are to be of approved design and sufficiently rigid to avoid resonance in the anode support. Weldable steel cores are to be fitted, and these are to be so designed as to retain the anode even when the anode is wasted.

2.3.4 Anodes are to be attached to the structure in such a way that they remain secure both initially and during service. The following methods of attachment would be acceptable:-

- a) Steel core connected to the structure by continuous welding of adequate section.
- b) Steel core bolted to separate supports, provided that a minimum of two bolts with lock nuts are used at each support. The separate supports are to be connected to the structure by continuous welding of adequate section.
- c) Approved means of mechanical clamping.

2.3.5 Anodes are to be attached to stiffeners, or may be aligned in way of stiffeners on plane bulkhead plating, but they are not to be attached to the shell. The two ends are not to be attached to separate members which are capable of relative movement.

2.3.6 Where cores or supports are welded to the main structure, they are to be kept clear of the toes of brackets and similar stress raisers. Where they are welded to asymmetrical stiffeners, they are to be connected to the web with the welding kept at least 25 (mm) away from the edge of the web. In the case of stiffeners or girders with symmetrical face plates, the connection may be made to the web or to the centerline of the face plate but well clear of the free edges. However, it is recommended that anodes are not fitted to the face plates of high tensile steel longitudinal.

## **2.4 Aluminum and magnesium anodes**

2.4.1 Aluminum and aluminum alloy anodes are permitted in tanks used for the carriage of oil, but only at locations where the potential energy does not exceed 275 (J) (i.e. 28 (kgf m)). The weight of the anode is to be taken as the weight at the time of fitting, including any inserts and fitting devices.

2.4.2 The height of the anode is, in general, to be measured from the bottom of the tank to the center of the anode. Where the anode is located on or closely above a horizontal surface (such as a bulkhead girder) not less than 1 (m) wide, provided with an upstanding flange or face plate projecting not less than 75 (mm) above the horizontal surface, the height of the anode may be measured above that surface.

2.4.3 Aluminum anodes are not to be located under tank hatches or tank cleaning openings unless protected by adjacent structure.

2.4.4 Magnesium or magnesium alloy anodes are permitted only in tanks intended solely for water ballast.

**2.5 Corrosion protection coatings for salt water ballast spaces**

- 2.5.1 In case of vessels which normally carry salt water for ballast purposes, all ballast spaces, having boundaries formed by the hull envelope, are to have a suitable corrosion protection coating applied in accordance with the manufacture's requirements.

**Section 3****Deck Covering****3.1 General**

- 3.1.1 Where plated decks are sheathed with wood or an approved composition, reductions in plate thickness may be allowed.
- 3.1.2 The steel deck is to be coated with a suitable material in order to prevent corrosive action, and the sheathing or composition is to be effectively secured to the deck.
- 3.1.3 Deck coverings in the following positions are to be of a type which will not readily ignite where used on decks:-
- a) Forming the crown of machinery or cargo spaces with accommodation spaces of cargo vessels
  - b) Within accommodation spaces, control stations, stairways and corridors of passenger vessels.

**End of Chapter**

**Chapter 3**  
**Principles for Scantlings and Structural Details**  
**Contents**

**Section**

1. General
2. Corrosion Additions
3. Plating
4. Stiffeners and Girders
5. End Attachments
6. Buckling

**Section 1**  
**General**

**1.1 Application**

- 1.1.1 Scantlings of various platings, stiffeners and girders to meet the local strength requirements are to be determined in accordance with the general principles given in this Chapter.

The design values of loads are given in chapters relevant to the structures under consideration.

- 1.1.2 Scantlings of hull members contributing to the longitudinal strength are also to comply with the requirements of Ch. 4.
- 1.1.3 Scantlings of hull members subjected to compressive stresses are also to comply with the requirements of Sec. 6.

**1.2 Symbols**

P = design pressure ( $\text{kN/m}^2$ ) as given in the relevant chapters calculated at the load point as given below:-

Load point for plates:-

- Midpoint of horizontally stiffened plate field
- Half the stiffener spacing above the lower support of vertically stiffened plate field, or at the lower edge of plate when the thickness is changed within the plate field.

Load point for stiffeners:-

- Midpoint of span.

Load point for girders:-

- Midpoint of load are supported by the girder.

s = stiffeners spacing, (mm), measured along the plating.

l = span of the stiffener, (m), in accordance with 4.1.1.

r = radius of curvature (mm).

S = span of the girder (m), in accordance with 4.1.2.

b = mean breadth (m), of the load area supported by the girder.

$h_w$  = height of web, (mm).

$b_f$  = width of flange, (mm).

a = allowable bending stress, ( $N/mm^2$ ) as given in the relevant chapters.

$a_y$  = minimum yield of stress of material, ( $N/mm^2$ ) may be taken as 235 ( $N/mm^2$ ) for normal strength steel.

k = material factor as defined in Ch. 2, Sec. 1.2.

E = modulus of elasticity,  $2.06 \times 10^5$  ( $N/mm^2$ ) for steel.

### 1.3 Frame spacing

- 1.3.1 The normal frame spacing between aft peak and 0.2 L from FP may be taken as:-

450 + 2L (mm) for transverse framing

550 + 2L (mm) for longitudinal framing.

- 1.3.2 In aft peak and fore peak the frame spacing is not to exceed 600 (mm) or that given in 1.3.1 whichever is less.

- 1.3.3 Where the actual frame spacing is higher than that mentioned above, the minimum thickness of various structural members are given in the Rules may require to be increased.

## Section 2

### Corrosion Additions

#### 2.1 General

- 2.1.1 The thickness of plates, stiffeners and girders in tanks for water ballast and / or cargo oil and in holds of dry bulk cargo carriers is to be increased by a corrosion addition ' $t_c$ ' as given in Table. 2.1.1

- 2.1.2 The required corrosion addition ' $Z_c$ ' to the section modulus of stiffeners and girders due to the thickness addition ' $t_c$ ' mentioned above may be approximated as:-

$$Z_c = \frac{t_c h_w (b_f + 0.3 h_w)}{1000} \text{ (cm}^3\text{)}$$

**Table 2.1.1 : Corrosion addition  $t_c$  (mm)**

| Item  | Space Category  | $t_c$             |
|---|---|-------------------|
| Internal members within and plate boundary between spaces of the given category | Ballast tank  | 1.5 <sup>1)</sup> |
|   | Cargo oil tank  | 1.5               |
|   | Hold of dry bulk cargo carriers                             | 2                 |
|   | Ballast tank / Cargo oil tank                               | 1.5 <sup>1)</sup> |
| Plate boundary between the two Given space categories                           | Ballast tank / Hold of dry bulk Cargo carrier               | 2                 |
|   | Ballast tank / Other category space                         | 1.0               |
|   | Cargo Oil Tank / Other Category Space                       | 1.0               |
|   | Hold of dry bulk cargo cargo Carrier / Other category space | 1.0               |

Notes:-

- 1) Where the relevant ballast or liquid cargo tanks extend upon the exposed weather deck the minimum corrosion addition in the region extended up to 1.5 (m) below the weather deck corrosion addition is to be increased by 0.5 (mm).
- 2) Hold of dry bulk cargo carriers refers to the cargo holds of vessels with class notation **Bulk Carrier** and **Ore Carrier**.
- 3) Other category space denotes the hull exterior and all spaces other than water ballast and cargo oil tanks and holds of dry bulk cargo carriers.

### Section 3

#### Plating

#### 3.1 General

3.1.1 Minimum requirements of thickness of various platings are given in relevant chapters.

3.1.2 The thickness 't' of plating subjected to lateral pressure is not to be less than

$$t = \frac{15.8 \sqrt{p}}{\sqrt{a}} \times 10^{-3} + t_c (\text{mm})$$

- 3.1.3 Any tapering of thickness of plating's contributing to the longitudinal strength is to be based upon linear variation of stress  $s$  allowed at specific regions.

## Section 4

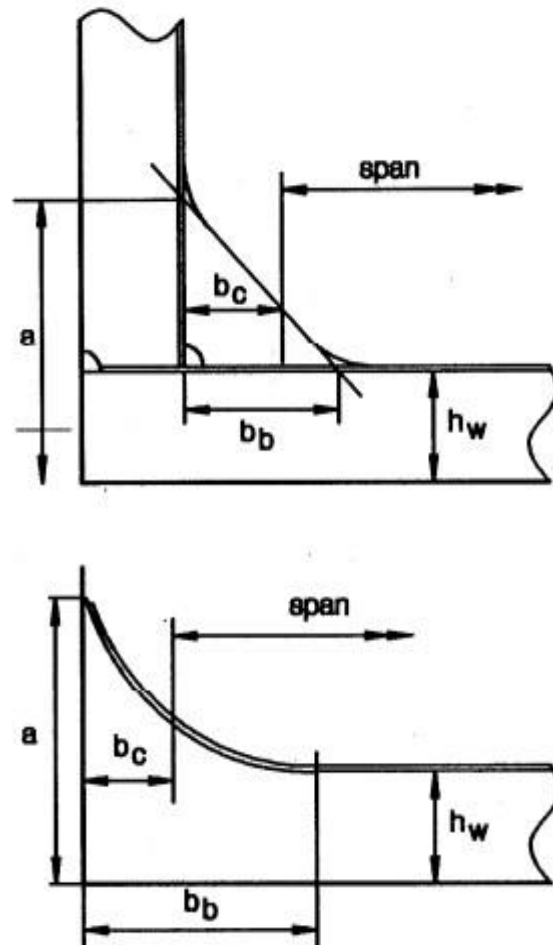
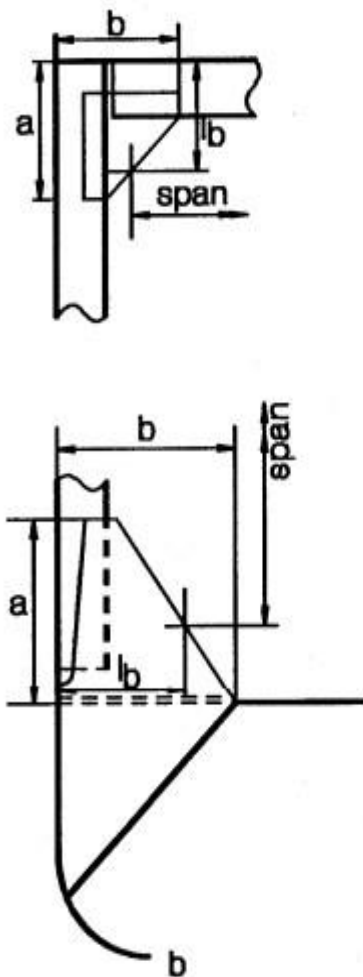
### Stiffeners and Girders

#### 4.1 Determination of span

- 4.1.1 For stiffeners, the span ' $l$ ' x  $m+$  is to be taken as the length of the stiffener between the two supporting members less the depth of stiffener on crossing panel if any. Where brackets larger than those required in 5.1.2 are fitted, the span may be determined as shown in Fig. 4.1.1.

For curved stiffeners, ' $l$ ' may be based on the chord length.

- 4.1.2 For girders, the span ' $S$ ' \*  $m+$  is to be taken as the length of the girder between the two supporting members less the web height of in-plane girder if any, and the correction for bracket ' $b_c$ ', as shown in Fig. 4.1.2.





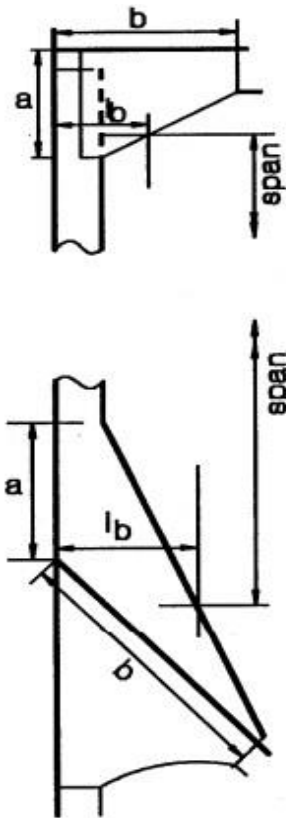
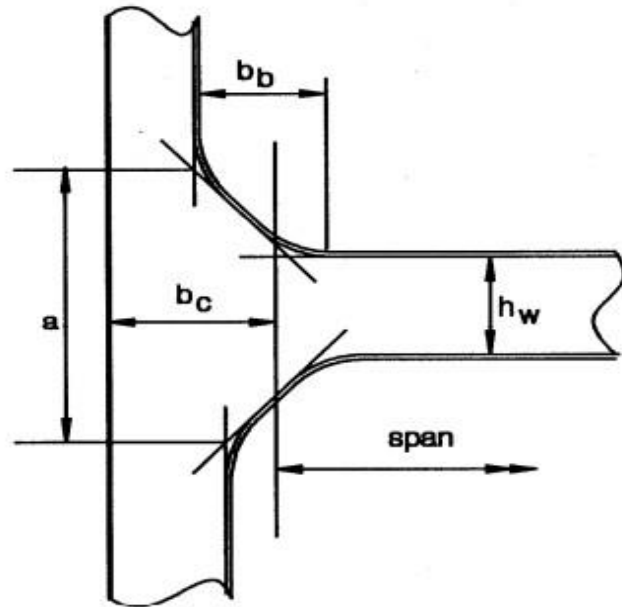


Fig.4.1.1



$$b_c = b_b (1 - h_w/a)$$

Fig.4.1.2

Figure

## 4.2 Effective width of attached plating

- 4.2.1 The area of the attached plating, to be used in the calculation of sectional properties of the stiffeners and girders, is to be taken as the cross-sectional area within the effective width of the attached plating.
- 4.2.2 The effective width of plating attached to a stiffener may be taken as the mean of spacing on either side of the stiffener.
- 4.2.3 The effective width of plating attached to a girder, 'be' is to be taken as per the following:  $b_e = c.b$ .

Where,

$c = c_1$ , for girders with uniformly distributed loads or with six or more evenly spaced point loads =  $c_2$ , for girders with three or less evenly spaced point loads.

| <b>Table 4.2.3 : Values of "c"</b> |      |      |      |      |      |      |      |      |
|------------------------------------|------|------|------|------|------|------|------|------|
| a/b                                | 0.5  | 1.0  | 2.0  | 3.0  | 4.0  | 5.0  | 6.0  | 7.0  |
| c <sub>1</sub>                     | 0.19 | 0.38 | 0.67 | 0.84 | 0.93 | 0.97 | 0.99 | 1.00 |
| c <sub>2</sub>                     | 0.11 | 0.22 | 0.40 | 0.52 | 0.65 | 0.73 | 0.78 | 0.80 |

For intermediate values of a/b and number of point loads, values of 'c' may be obtained by interpolation. a = span of girder, for simply supporting girders, (m).

= 60 percent of span of girder, for girders fixed at both ends. (m)

4.2.4 In case of girders on corrugated bulkheads which run across the corrugations, the effective width of attached plating is to be taken as 10% of that obtained from 4.2.3.

4.2.5 The effective cross sectional area of the attached plating is not to be less than that of the face plate.

### 4.3 Scantlings of stiffeners

4.3.1 The section modulus 'Z' of stiffeners subjected to lateral pressure is not to be less than:-

$$Z = \frac{s.p.l^2}{m} + Z_c(\text{cm}^3) \quad \text{Where,}$$

m = bending moment factor depending on the arrangement at the supports and variation of lateral pressure as given in the relevant chapters. Where not stated, the 'm' value may generally be taken as:-

= 12 for continuous longitudinal stiffeners

= 10 for transverse, vertical and non-continuous longitudinal stiffeners fixed at both ends.

= 8 for stiffeners simply supported at both ends.

4.3.2 Where stiffeners are not perpendicular to the plating, the section modulus as obtained from 4.3.1 is to be increased by the factor  $\csc \alpha$  being the angle between the stiffener web and the plane perpendicular to the plating.

### 4.4 Scantlings of girders

4.4.1 The scantlings of simple girders subjected to lateral pressure which can be considered as conforming to the general beam theory are to satisfy the requirement given in 4.4.2

4.4.2 The section modulus 'Z' of girders subjected to lateral pressure is not to be less than.

$$Z = \frac{b.p.s^2.10^8}{m} + Z_c(\text{cm}^3) \quad \text{Where,}$$

m = bending moment factor depending upon the arrangement at supports and variation of lateral pressure as given in the relevant chapters. Where not stated, the 'm' value

may generally be taken as 12 for continuous longitudinal girders and 10 for all other girders.

- 4.4.3 Where opening are cut in the girder web, they are to be away from the girder ends and scallops for stiffeners; with their center located as near to the neutral axis of the girder as practicable. Openings of depth exceeding 25% of the girder depth or 300 (mm) and, of length exceeding the depth of the girder or 60% of the secondary stiffener spacing, are to be reinforced all around at the edge; or alternatively by providing horizontal and vertical stiffeners.
- 4.4.4 Girders are to be provided with adequate lateral stability by tripping brackets fitted generally at every fourth stiffener. Tripping brackets are also to be fitted at the toes of end brackets and in way of concentrated loads such as heels of pillars or crossties.

## Section 5

### End Attachments

#### 5.1 End attachments of stiffeners

- 5.1.1 Continuity of all stiffeners participating in longitudinal strength is to be maintained over transverse members within 0.5 L amidships. Longitudinal abutting at transverse members may be accepted provided the brackets connecting the ends of the longitudinal are of adequate size and are either continuous or properly aligned.
- 5.1.2 Scantlings of brackets fitted on stiffeners not participating in longitudinal strength are not to be less than the following:-

- The arm lengths, 'a and b' (See Fig. 4.1.1) are to be such that:-

i)  $a, b \geq 0.8L_8$

and

ii)  $a + b \geq 2.0 l_b,$

Where,

$$l_b = 24 \sqrt{Z} + 75(\text{mm})$$

- Thickness of un-flanged bracket is to be not less than:-

$$t = (4.0 + 0.3 \sqrt{Z} + t_c)(\text{mm})$$

- Thickness of flanged bracket is to be not less than:-

$$t = (3.0 + 0.25 \sqrt{Z} + t_c)(\text{mm})$$

- Width of flange,  $w \geq Z/25$  (mm), but not less than 50 (mm).

where,

Z is the section modulus ( $\text{cm}^3$ ), of the smaller stiffener, being connected.

## 5.2 End attachment of girders

- 5.2.1 The end attachments and supporting structure of the girders are to provide adequate resistance against rotation and displacement of the joint and effective distribution of load from the member. Supporting members to which the girder are being connected, may require additional strengthening to provide adequate stiffness to resist rotation of the joint.

Where the end attachment provides only a low degree of restraint against rotation, the girder is generally to be extended beyond the point of support by at least two frame spaces before being gradually tapered.

Connections between girders forming a ring system are to be such as to minimize stress concentrations at the junctions. Integral brackets are generally to be radii used or well-rounded at the toes.

Where the face plate of the girder is not continuous over the bracket, the free edge of the bracket is to be stiffened and the face plate of the girder is to be extended well beyond the toe of the bracket.

- 5.2.2 The thickness 't' of brackets on girders is not to be less than that of the girder web.

The arm length 'a' including the depth of girder is not to be less than:-

$$a = 83 \frac{\sqrt{Z}}{t} (m);$$

where,

Z = the section modulus (cm<sup>3</sup>), of the girder to which the bracket is connected.

The cross sectional area 'A' of the face plate on the girder bracket is not to be less than:-

$$A_f = 0.001 l_f t \text{ (cm}^2\text{)}$$

Where,  $l_f$  is the length (mm), of the free edge of the bracket.

Additional stiffeners parallel to the bracket face plate are to be fitted on webs of larger brackets. The arm length of an un-stiffened triangular end panel of bracket is generally not to exceed 100 t (mm).

## Section 6

### Buckling

#### 6.1 General

6.1.1 The critical buckling stress  $\sigma_{cr}$  of plate panels and other members subjected to compressive loads is to be such that:-

$$\sigma_{cr} = \frac{\sigma_c}{n}$$

Where,

$\sigma_c$  = compressive stress to be considered as per Sec. 6.3

$n = 1.0$  for deck, longitudinally stiffened side shell and single bottom plating.

$= 0.9$  for bottom, inner bottom plating in double bottom and transversely stiffened side shell plating

$= \frac{0.7}{1 + l_m/i}$  (need not be taken smaller than 0.3):-

- For axially loaded members such as pillars, cross-ties, panting beams etc., in general – to be reduced by 15 percent where the loads are primarily dynamic in nature.
- For ' $l_m$ ' and ' $i$ ' See 6.2.2.

6.1.2 The critical compressive buckling stress  $\sigma_{cr}$  determined as follows is not to be less than the maximum compressive stress developed in the members under consideration.

$$\sigma_{cr} = \sigma_E \text{ when } \lambda \leq 0.5 \lambda_y$$

$$= \lambda_y \left( 1 - \lambda_y/4 \right) \sigma_E \text{ when } \lambda > 0.5 \lambda_y$$

Where,

$\sigma_E$  = ideal elastic buckling stress as per Sec. 6.2.

#### 6.2 Ideal elastic buckling stress

6.2.1 The  $\sigma_E$  value for plating may be taken as:-

$$\sigma_E = 0.9 K E (t - t_c)^2 / s^2 \text{ (N/mm}^2\text{)}$$

Where,

$$K = \frac{8.4}{\psi + 1.1}$$

- For plating with stiffeners in the direction of the compressive stress
 
$$= c \left[ 1 + \left( \frac{s}{100t} \right)^2 \right]^2 \left( \frac{2.1}{\psi + 1.1} \right) =$$
- For plating with stiffeners in the direction perpendicular to the compressive stress  $\psi$  = ratio between the smaller and the larger values of the compressive stress assuming a linear variation (See Fig 6.2.1)

$C = 1.30$  when plating is stiffened by floors or deep girders

$= 1.21$  when stiffeners are angles or T sections

$= 1.10$  when stiffeners are bulb flats

$= 1.05$  when stiffeners are flat bars

$s$  = shorter side of plate panel, (mm)

$l$  = longer side of plate panel, (m)

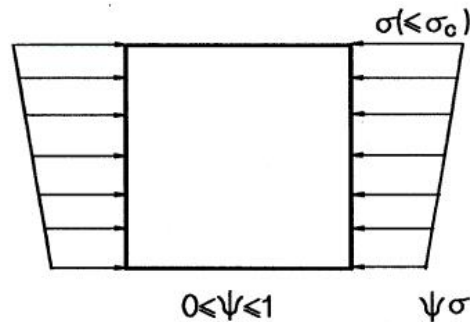


Fig. 6.2.1

### Figures

6.2.2 The value of axially loaded members may be taken as:-

$$E = 0.001 C E (i/l_m)^2 \text{ (N/mm}^2\text{)}$$

$C = 1.0$  for both ends hinged;  $= 2.0$  for one end fixed;  $= 4.0$  for both ends fixed

$i$  = radius of gyration of the member, (cm).

$$= (I/a)^{1/2}$$

$I$  = moment of inertia of the member, (cm<sup>4</sup>), about the axis perpendicular to the direction of buckling being considered

$a$  = cross sectional area of the member, (cm<sup>2</sup>)

$l_m$  = length of the member, (m).

Where end connections of a member are different with respect of the two principal  $E$  is to be found out for both cases using appropriate values of 'C' and 'I'.

**End of Chapter**

**Chapter 4**  
**Longitudinal Strength**  
**Contents**

**Section**

- 1 General
- 2 Vertical Bending Moments
- 3 Hull Section Modules and Moment of inertia
- 4 Openings of Longitudinal Strength Members

**Section 1**  
**General**

**1.1 Application**

- 1.1.1 Scantlings of hull members contributing to longitudinal strength are to comply with the requirements given in this Chapter. These members are also to comply with requirements of buckling strength given in Ch.3, Sec. 6 and of local strength given in relevant chapters of Pt. 3.
- 1.1.2 Still water bending moments are to be calculated for all vessels with unusual or non-uniform weight or cargo distribution and for other vessels of  $L \geq 60$  m.  
Such vessels are to be provided with an approved loading manual which describes the loading conditions on which the design is based and also given the values of still water bending moments and permissible limits.

**1.2 Symbols**

$L, B, T, k$  as defined in Ch. 1 Sec. 2

$I_n$  = moments of inertia of hull girder, (cm<sup>4</sup>), about the transverse neutral axis at the section under consideration.

$Z_n$  = vertical distance (m) of the horizontal neutral axis above base line.

$M_s$  = design still water bending moment (KN-m) as given in 2.1.2.

$M_w$  = rule wave bending moment (kN-m) as given in 2.2.1.

## Section 2

### Vertical Bending Moments

#### 2.1 Still water bending moment

2.1.1 Still water bending moments are to be calculated for the following loading conditions as a minimum:

- a) Fully loaded condition with design cargo distribution (S)
- b) Light condition with full consumables, stores, crew and ballast, if any.

In addition other loading conditions which may be more onerous, e.g. intermediate conditions of special loading or discharging sequences, are to be investigated.

2.1.2 The design value of still water bending moment  $M_s$  to 0.4 L amidships is to be taken as the greater of the following:-

- a) The maximum of sagging or hogging still water bending moments obtained for the loading conditions specified in Sec. 2.1.1. and
- b)  $0.375 L^2 B$  (KN-m)

At locations outside 0.4 L amidships the design value of still water bending moments  $M_s$  may be linearly reduced to zero at perpendiculars.

#### 2.2 Wave load conditions

2.2.1 The rule vertical wave bending moment  $M_w$  for 0.4 L amidships is to be taken as

$$M_w = CL^2B \text{ (kN – m)}$$

Where,

C = coefficient as per Table 2.2.1.

| Table 2.2.1 |  |
|-------------|--|
| Zone        | Coefficient C  |
| 1           | 0.30 for $L \leq 20$ m<br>$0.3 + 0.05 (L - 20)$ for $20 < L < 60$<br>0.5 for $L \geq 60$ m |
| 2           | 0.3  |
| 3           | 0.15   |

At locations outside 0.4L amidships, the value of rule wave bending moment  $M_w$  is to be linearly reduced to zero perpendiculars.



### Section 3

#### Hull Section Modulus and Moments of Inertia

##### 3.1 Calculation of section properties

3.1.1 When calculating the moment of inertia and section moduli, the net sectional area (after deduction for openings) of all continuous longitudinal strength members is to be taken into account. Small isolated lightening holes in girders need not be deducted.

Superstructures not forming strength deck (See Ch. 1, Sec. 2.2), deckhouses, bulwarks and non-continuous longitudinal hatch coamings are not to be included in above calculations.

In case of vessels with continuous trucks or longitudinal hatch coamings, their net sectional area may be included in the calculations provided they are effectively supported by longitudinal bulkheads or deep girders. The section modulus at deck however, is then to be calculated as given in 3.1.3.

3.1.2 The main strength members included in the calculation of hull moment of inertia and section modulus are to extend continuously through the cargo region and sufficiently far towards the ends of the vessel. Longitudinal bulkheads are to terminate at effective transverse bulkhead and large transition brackets are to be fitted in line with the longitudinal bulkheads.

3.1.3 The mid ship section modulus 'Z' at deck or bottom about the transverse neutral axis is to be obtained as follows:-

$$Z = I_n / (100.z) \text{ (cm}^3\text{)}$$

Where,

z = the vertical distance (m) from the horizontal neutral axis upon the strength deck at side or the base line, as relevant.

However, in case of vessels where continuous trunks or longitudinal hatch coamings are to be included in the section modulus calculation as per Sec. 3.1.1 the distance z for calculation of modulus at deck is to be taken as the greater of the following:-

z = z as above

$$z = z_n (0.9 + 0.2 y/B)$$

Where,

$Z_n$  = the vertical distance from the horizontal neutral axis to top of continuous strength member.

y = athwart ship distance from the centerline of the vessel to the side of the strength member.

$z_n$  and  $y$  are to measured to the point giving the largest value of  $z$ .

### 3.2 Extent of high tensile steel

- 3.2.1 Where high tensile steels are used in the main hull structure in order to reduce the section modulus requirement, the vertical and longitudinal extent of its use is to be such that adjacent structure made of ordinary hull structural steel is not stressed beyond the stress level permissible for ordinary steel.

### 3.3 Section modulus requirement

- 3.3.1 At any transverse section, the hull section modulus  $Z$ , about the transverse neutral axis for the still water bending moments  $M_s$  given in 2.1 and wave bending moments  $M_w$  given in 2.2 is not to be less than:-

$$Z = \left( \frac{M_s + M_w}{\sigma_L} \right) \times 10^3 [\text{cm}^3]$$

Where,

$$\begin{aligned} \sigma_L &= 175/k \text{ (N/mm}^2\text{) within } 0.4 L \text{ amidships} \\ &= 125/k \text{ (N/mm}^2\text{) within } 0.1 L \text{ from AP. and F. P.} \end{aligned}$$

Between the specified region  $a_L$  is to be obtained by linear interpolation.

- 3.3.2 Scantlings of all continuous longitudinal members of hull girder based on the section modulus requirement in 3.3.1 are to be maintained within 0.4 L amidships.

In the region outside 0.4 L amidships, the scantlings are to be gradually tapered to the local requirements at the ends.

### 3.4 Moment of inertia requirement

- 3.4.1 The moment of inertia in of the hull section about the transverse neutral axis, at mid-ship, is not to be less than:-

$$I_n = 3 L. Z(\text{cm}^4) \text{ Where,}$$

$Z$  = Hull section modulus amidships as required by 3.3.1.

## Section 4

### Openings in Longitudinal Strength Members

#### 4.1 Locations

- 4.1.1 As far as practicable, openings are to be avoided in the keel plate and in the bilge plate within 0.6 L amidships.

- 4.1.2 Openings in the strength deck within 0.6 L amidships are as far as practicable to be located inside the line of large hatch openings.

Necessary openings outside this line are to be kept well clear of the vessel's side and hatch corners.

- 4.1.3 Small openings are generally to be kept well clear of other openings in the longitudinal strength members.

#### **4.2 Reinforcements**

- 4.2.1 All openings are to be adequately framed and arrangements in way of corners and openings are to be such as to maintain structural continuity and minimize the creation of stress concentrations.

Corners of hatchways are to be reinforced as given in Ch. 8, Sec. 2. Smaller openings in the strength deck and outer bottom within 0.6 L amidships are to be reinforced as given in 4.2.2 to 4.2.5 below. The area of these reinforcements is not to be included in the sectional areas used in the section modulus calculation.

- 4.2.2 Circular openings with diameter equal to or greater than 0.325 (m) are to have edge reinforcement having sectional area A not to be less than:-

$$A = 2.5 \text{ b.t. (cm}^2\text{)}$$

Where,

b = diameter of opening (m)

t = thickness of the plating (mm).

- 4.2.3 Elliptical openings are to have their major axis in the fore and aft direction. Where the ratio of the major axis to minor axis is less than 2, the openings are to be reinforced as given in 4.2.2 taking b as the breadth of the opening (minor axis).

- 4.2.4 Rectangular openings are to have their corners well rounded. Where corners are of circular shape the radius is not to be less than 20 per cent of the breadth of the opening and the edges are to be reinforced as given in 4.2.2 taking b as the breadth of the opening.

Where the corners are to elliptical shape as given in 4.2.3 or of streamlined shape as given in 4.3, the reinforcement will generally not be required provided that the transverse extension of the curvature, a, shown in Fig 4.3.2 is not less than:-

$$a = 0.15b \text{ (m)}$$

- 4.2.5 Openings in side shell subjected to larger shear stresses are to be of circular shape and are to be reinforced as given in 4.2.2 irrespective of the size of opening.

#### **4.3 Hatchway corners**

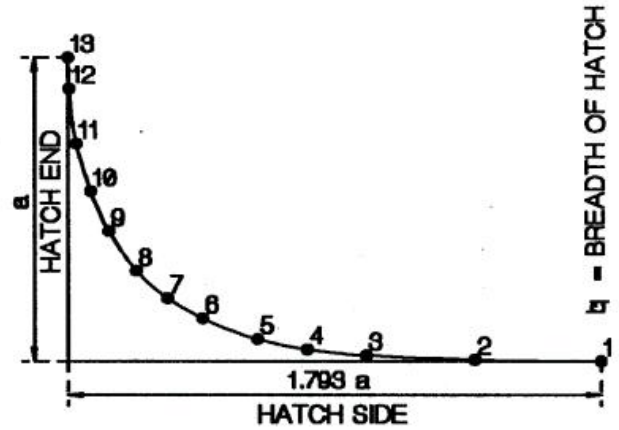
- 4.3.1 Where corners are of circular shape, the radius r within 0.6 L amidships is not to be less than

$$r = 0.05 \text{ b (m), minimum 0.3 (m); where,}$$

b = breadth of the hatchway (m)

Where corners are of streamlined shape, as given by Fig. 4.3.2, the transverse extension of the curvature,  $a$ , is not to be less than

$a = 0.05 b$  (m), minimum 0.3 (m)



Figure

| Ordinates of streamlined corner |             |             |
|---------------------------------|-------------|-------------|
| Point                           | Abscissa, x | Ordinate, y |
| 1                               | 1.793a      | 0.0         |
| 2                               | 1.381a      | 0.002a      |
| 3                               | 0.987a      | 0.021a      |
| 4                               | 0.802a      | 0.044a      |
| 5                               | 0.631a      | 0.079a      |
| 6                               | 0.467a      | 0.131a      |
| 7                               | 0.339a      | 0.201a      |
| 8                               | 0.224a      | 0.293a      |
| 9                               | 0.132a      | 0.408a      |
| 10                              | 0.065a      | 0.548a      |
| 11                              | 0.022a      | 0.712a      |
| 12                              | 0.002a      | 0.899a      |
| 13                              | 0.0         | 1.000a      |

Fig. 4.3.2: Streamlined deck corner

End of Chapter

**Chapter 5**  
**Bar, Keel, Stem and Stern frames**  
**Content**

**Section**

- 1 General
- 2 Bar Keel
- 3 Stern
- 4 Stem Frames

**Section 1**

**General**

**1.1 Scope**

- 1.1.1 This chapter provides requirements for bar keel, bar stem, stern frames and shaft brackets.

**1.2 Material**

- 1.2.1 All steel plates and sections, castings and forgings used in the constructions are to be tested and approved in accordance with the requirements of Ch.3, Ch. 4 and Ch. 5 of Pt. 2 'Materials' of the Rules & Rules for the Construction and Classification of Steel Vessels (Main Rules), respectively. Material grades for plates and sections are to be selected as per Pt 3, Ch.2
- 1.2.2 Bar keels and stems may either be steel castings or forgings or rolled plates or bars.
- 1.2.3 Stern frames, rudder hors and shaft brackets may be constructed of cast or forged steel or may be fabricated from plates.

**1.3 Symbols**

- 1.3.1 L, T as defined in Ch. 1, Sec. 2.

**Section 2**

**Bar Keel**

**2.1 Scantlings**

- 2.1.1 The scantlings of bar keel are not to be less than:-

Depth =  $75 + 0.75 L$  (mm)

Thickness =  $10 + 0.4 L$  (mm)

Minor deviations from the above values may be accepted provided the required sectional area is maintained.

### **Section 3**

#### **Stem**

##### **3.1 Bar stem**

- 3.1.1 The cross sectional area 'A' of a bar stem, below the summer load waterline, is not to be less than

$$A = 0.6 L \text{ (cm}^2\text{); or } 12 \text{ (cm}^2\text{)}$$

- Whichever is greater.

##### **3.2 Plate stem**

- 3.2.1 The thickness 't' of the plates stem below the summer load water line is not to be less than:  $t = (0.08 L + 5.0) \text{ (mm)}$
- 3.2.2 The thickness of the plate stem may be gradually reduced to that of the side shell at the stem head.
- 3.2.3 The plate stems are to be supported by horizontal diaphragms spaced not more than 1.0 (m) apart. Where the stem plate radius is large, a centerline stiffener or web is to be provided.

### **Section 4**

#### **Stern Frames**

##### **4.1 General**

- 4.1.1 Stern frames, shaft brackets etc. are to be designed such that they are effectively integrated into the vessel's structure.
- 4.1.2 In castings, sudden changes of section or possible constrictions to the flow of metal during castings are to be avoided. All fillets are to have adequate radii, which in general should not be less than 50 to 75 (mm), depending on the size of the casting.
- 4.1.3 Fabricated and cast steel stern frames are to be strengthened at intervals by webs spaced not more than 700 (mm) apart. In way of the upper part of the stern frame arch, these webs are to line up with the floors.
- 4.1.4 Rudder posts and propeller posts are to be connected to floors of increased thickness.
- 4.1.5 It is recommended that the after body of the vessel be so shaped as to ensure adequate flow of water to the propeller so as to prevent uneven formation of eddies, as far as possible.

## 4.2 Stern frames

4.2.1 The scantlings of the propeller posts are not to be less than the following:-

Forged propeller posts (see Fig. 4.2.1 (a))

$$A = (8 + 0.4L) T \text{ (cm}^2\text{) for } L < 60 \text{ (m)}$$

$$= 32 T \text{ (cm}^2\text{) for } L > 60 \text{ (m)}$$

Fabricated propeller posts (see Fig. 4.2.1 (b))

$$l = 150 T \text{ (mm)}$$

$$w = 100 T \text{ (mm)}$$

$$r = 18 T \text{ (mm)}$$

$$t_1 = T \text{ (mm)}$$

$$t_w = 5 T \text{ (mm)}$$

Cast steel propeller posts (see Fig. 4.2.1 (c))

$$l = 125 T \text{ (mm)}$$

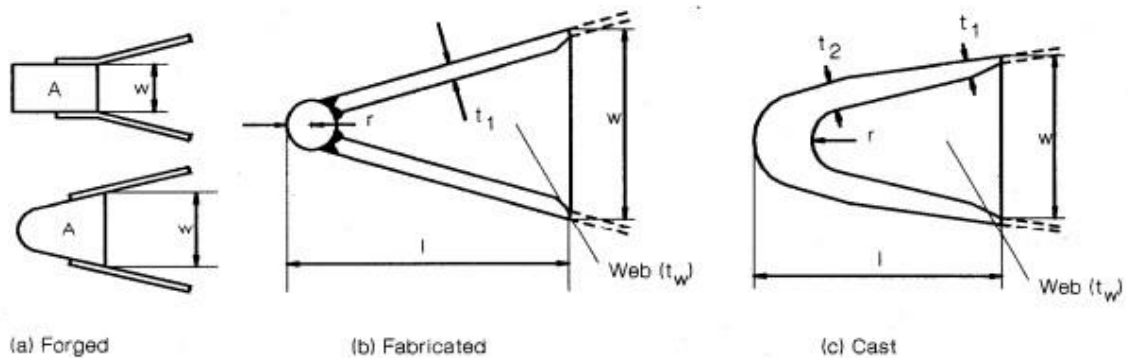
$$w = 85 T \text{ (mm)}$$

$$r = 20 T \text{ (mm)}$$

$$t_1 = 12 T \text{ (mm)}$$

$$t_2 = 14 T \text{ (mm)}$$

$$t_w = 7 T \text{ (mm)}$$



**Fig.4.2.1 : Types of propeller posts**

### Figure

Where the sections adopted differ from the above, the section modulus about the longitudinal axis is to be equivalent to that with the Rule scantlings.

On stern frames without sole pieces, the modulus of the propeller post, about the longitudinal axis, may be gradually reduced by 15 percent below the propeller boss, provided the thicknesses are maintained as above.

- 4.2.2 The wall thickness of the boss ' $t_b$ ' in the propeller post is not to be less than:  $t_b = 0.25 d_{ts} + 12$  (mm)

Where,

$d_{ts}$  = Rule diameter of tail shaft, (mm)

In fabricated stern frames the connection of the propeller post to the boss is to be by full penetration welds.

### 4.3 Sole Piece

- 4.3.1 The section modulus ' $Z_T$ ' of the sole piece against transverse bending is not to be  $1/90 c F_r x$  less than  $Z_T = (\text{cm}^3)$  Where,

$F_r$  = Rudder force (N) as defined in Pt. 3 Ch. 12, Sec. 3

$x$  = distance of the cross section under consideration from the center line of rudder stock, \*m+. ' $x$ ' is not to be taken as less than  $a/2$ .

$a, b, c$  = shown in Figures 4.3.1 (a) and (b) (m).

The above requirement of  $Z_T$  it to be increased by 15 percent for cast steel sole pieces.

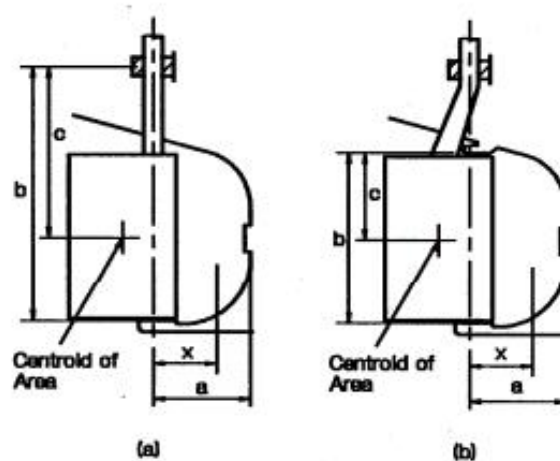


Fig.4.3.1 : Open stern frame

### Figure

- 4.3.2 The section modulus ' $Z_v$ ' of the sole piece against vertical bending is not to be less than:-

$$Z_v = Z_T/2 (\text{cm}^3)$$



4.3.3 The sectional area of sole piece is not to be

1/5400 less than  $A_s = (\text{cm}^2)$

4.3.4 The sole piece is to extend at least two frame spaces forward of the forward edge of the propeller boss and beyond this, the cross section of the extension is to be gradually reduced to that necessary for an efficient connection to the keel plate. Fabricated sole pieces are to have adequate internal stiffening.

#### **4.4 Shaft brackets**

4.4.1 Where the propeller shafting is exposed to the sea for some distance clear of the main hull, it is generally to be supported adjacent to the propeller by independent brackets having two arms. It is recommended that the angle included between the arms differ from the angle included between the propeller blades. In very small vessels the use of single arm brackets will be considered.

4.4.2 Fabricated brackets are to be designed to avoid or reduce the effect of hard spots and ensure a satisfactory connection to the hull structure. The connection of the arms of the bearing boss is to be by full penetrating welding.

4.4.3 Generally, bracket arms are to be carried through the shell plating and attached to floors or girders of increased thickness. The shell plating in way of shaft brackets is to be increased in thickness to a minimum of 1.5 times the Rule bottom shell plating thickness amidships. In way of the bracket arms an insert plate is to be provided of thickness not less than:

$t = 1.6 \ d_{ts}$  where  $d_{ts}$  is the tail shaft diameter.

The connection of the bracket arms to the shell plating is to be by full penetration welding.

4.4.4 The scantlings of solid or build-up shaft brackets are to comply with the following:-

$t = 0.4 \ d_{ts} \text{ (mm)}$

$A = 4.5 \ d_{ts}^2 \cdot 10^{-3} \text{ (cm}^2\text{)}$

$Z_T = 30 \ d_{ts}^3 \cdot 10^{-6} \text{ (cm}^3\text{)}$

$t$  = thickness of the bracket arms

$A$  = cross sectional areas of the bracket arms

$Z_T$  = Section modulus of the bracket arms against transverse bending

**End of Chapter**

**Chapter 6**  
**Bottom Structure Contents**  
**Contents**

**Section**

- 1 General
- 2 Structural Arrangement and Details
- 3 Design Loads
- 4 Bottom and Inner Bottom plating
- 5 Single Bottom
- 6 Double Bottom
- 7 Engine Seating

**Section 1**  
**General**

**1.1 Scope**

- 1.1.1 The scantlings and arrangement of bottom structure as defined in Ch. 1, Sec. 2 are to comply with the requirements given in this chapter.

**1.2 Symbols**

L, B, T,  $C_b$ , k as defined in Ch. 1, Sec. 2.

s = spacing of stiffeners, (mm)

l = span of stiffeners, (m)

b = spacing of girders, (m)

S = span of girders, (m)

$t_c$ ,  $Z_c$  are corrosion additions to the thickness and section modulus respectively, as given in Ch. 3, Sec. 2.1.

$f_B Z_R/Z_B$  where,

$Z_R$  = Rule mid-ship section modulus ( $\text{cm}^3$ ) as required by Ch.4

$Z_B$  = Actual mid-ship section modulus ( $\text{cm}^3$ ) provided at bottom.

## Section 2

### Structural Arrangement and Details

#### 2.1 General

- 2.1.1 Depth of wells constructed in the double bottom, in connection with the drainage arrangement of holds, is to be kept in the minimum.
- 2.1.2 The continuity of the bottom, bilge and inner bottom longitudinal is to be maintained in accordance with Ch. 3, Sec. 5.1.1
- 2.1.3 The bilge keel and the ground bar to which it is attached are to be gradually tapered at ends and arranged to finish in way of suitable internal stiffening, Butt welds in the bilge keel and the ground bar are to be well clear of each other and those in the shell plating.
- 2.1.4 The weld connections are to comply with the requirements of Ch. 16.

#### 2.2 Access, ventilation and drainage

- 2.2.1 Adequate access it to be provided to all parts of the double bottom, where the vertical dimension of the lightening hole exceeds 50 percent of the web height adequate reinforcements are to be provided. The diameter reinforcement are to be provided. The diameter of lightening holes in the bracket floors is not to exceed 1/3 of the breadth of the brackets.

Lightening holes or manholes are normally not to be cut in floors or girders towards their ends and under large pillars supporting structures. Manholes in inner bottom are to have reinforcement rings, and the man hole covers in the inner bottom plating in cargo holds are to be effectively protected. The edges of all holes are to be smooth.
- 2.2.2 To ensure the free passage of air and water from all parts of the tanks of air pipes and suctions, air and drain holes are to be provided in all non-watertight members. The air holes are to be placed as near to the inner bottom as possible and their total area is to be greater than the area of the fitting pipes. The drain holes are to be placed as near to the bottom as possible.
- 2.2.3 The access opening to pipe tunnel is to be visible above the floor plates and is to be fitted with a rigid water tight closing device. A notice board stating that the access opening to the pipe tunnel is to be kept closed, is to be fitted near the opening. The opening is to be regarded as an opening in water tight bulkhead.

### Section 3

#### Design Loads

#### 3.1 Bottom shell

3.1.1 The design process 'p'\*kN/m<sup>2</sup> on outer bottom is to be taken as = 10 t<sub>1</sub>(kN/m<sup>2</sup>)

| Table 3.1.1 : Values of T <sub>1</sub>   |  |
|--|--|
| Zone   | T <sub>1</sub>   |
| 1  | T + 1.0 (m) for L > 60 (m)<br>T + 0.6 (m) for L < 20 (m) |
| 2  | T + 0.6 (m)  |
| 3  | T + 0.3 (m)  |
| For intermediate values of L in Zone 1, T <sub>1</sub> to be linearly interpolated |  |

In way of tanks, the design pressure is not to be taken less than integral pressure 'p' given in 3.2.1

#### 3.2 Watertight floors and girders

3.2.1 The design pressure 'p' on watertight floors and girders in double bottom tanks is to be taken as the greater of:

$$p = 6.7 h_p \text{ (kN/m}^2\text{)}$$

$$p = 10 (h_s + 1) \text{ (kN/m}^2\text{)}$$

$h_p$  = vertical distance (m), from the load point to the top of air pipe.

$h_s$  = vertical distance (m), from the load point to top of the tank.

#### 3.3. Inner bottom

3.3.1 The design pressure 'p' on the inner bottom to be taken as the greater of that given in 3.2.1 and the following:-

In way of cargo hold, the design pressure 'p' is not to be taken as less than:-

$$p = 12.5 p_H \text{ (kN/m}^2\text{)}$$

Where,

$p$  = cargo density (t/m<sup>3</sup>) normally not to be taken as less than 0.7 (t/m<sup>3</sup>)

$H$  = height (m), to deck or top of hatchway coaming.

## Section 4

### Bottom and Inner Bottom Plating

#### 4.1 Keel plate

- 4.1.1 The width of the plate keel is not to be less than  $(400 + 10L)$  (mm). The thickness is to be 1 (mm) greater than that required for the adjacent bottom plating.

#### 4.2 Bottom, bilge and inner bottom plating

- 4.2.1 The thickness of the bottom and inner bottom plating is to be not less than:-  
- for bottom plating

$$t = (t_o + 0.04L) \sqrt{k} + t_c \text{ (mm)}$$

for inner bottom plating

$$t = (t_o + 0.03L) \sqrt{k} + t_c \text{ (mm) but not less than 6.0 (mm)}$$

Where,

$t_o = 4.0$  (mm), in general.

$= 6.0$  (mm), for inner bottom plating where ceiling is not fitted.

$= 4.0$  (mm) for inner bottom plating where wooden ceiling of 50 (mm) thickness is fitted.

- 4.2.2 The bottom, bilge and inner bottom plating is also to comply with the requirements of buckling strength given in Ch.3, Sec. 6.
- 4.2.3 For vessels discharged by grabs and where no ceiling is fitted, the plating thickness 't' of the inner bottom and exposed parts of sloping bulkheads is not to be less than:-
- $$t = 0.0085 (s+800) \sqrt{k} + t_c \text{ (mm)}$$
- 4.2.4 Where the inner bottom is subjected to wheel loads from cargo handling vehicles, the scantlings are also to comply with the requirements given in Ch.8, Sec. 6.

## Section 5

### Single Bottom

#### 5.1 Transverse framing

- 5.1.1 Plate floors of following scantlings are to be fitted at every frame.

Depth at centerline  $d = 40B$  (mm) in general thickness of web,  $t = d/100 + 2.5$  (mm)

Section modulus

$$Z = 0.006 s.l_f^2 \cdot T1(\text{cm}^3) \text{ in cargo holds}$$

$$= 0.0072 s.l_f^2 \cdot T1(\text{cm}^3) \text{ in machinery and other spaces.}$$

Where,

$l_f$  = span of floor, measured on the top of floor plate from side to side.

= longitudinal bulkheads are provided the span,  $l_f$  not to be taken less than  $0.4B$

$T_1$  is as defined in 3.1.1

The thickness of face plate is not to be less than  $1/15$  of the face width.

The top of floors, in general is to be level from side to side. However, in vessels having considerable rise to floor, the depth of web at 10 percent of the span from ends, is not to be less than half the depth at centerline.

If the height of floors between engine girders is reduced in way of crankcase, the face plate area is to be suitably increased, however the reduced height is normally not to be less than  $2/3$  of 'd' as given above.

- 5.1.2 On all vessels one center girder is to be fitted and in addition side girders are to be fitted such that spacing of girders does not exceed 3.0 (m). The girders are to be extend as far forward and aft as practicable and where they are cut at transverse bulkheads the longitudinal continuity is to be maintained. Where the bottom structure changes into a double bottom structure, the bottom girders are to extend at least 3 frame spaces in to double bottom structures.

The scantlings of the center girders and side girders are to be not less than that of the floors. The thickness of face plates is not to be less than  $1/15$  of the face width.

- 5.1.3 In the after peak of single vessels, the height of the floors is to be increased such that their upper edge is well above the stern tube.
- 5.1.4 Where single bottom in the cargo region is stiffened by transverse frames supported by longitudinal girders, the scantlings of the frames and longitudinal girders are to be determined in accordance with 6.2.3 and 5.2.3, 5.2.4 respectively.

## 5.2 Longitudinal framing

- 5.2.1 The spacing of bottom transverses is normally not to exceed 3.0 (m). The bottom transverses are to be supported by primary girders or longitudinal bulkheads. Where the design does not incorporate a centerline bulkhead, at least a docking girder to be provided. The scantlings of simple girders and transverses are to be obtained in accordance with 5.2.3. The scantlings of a complex girder system are to be based on a direct stress analysis.
- 5.2.2 The section modulus 'Z' of the bottom longitudinal is not to be less than:-

$$Z = \frac{8pl^2}{12\sigma} + Z_c[\text{cm}^3]$$

Where,

$p$  = application design pressure ( $\text{kN/m}^2$ ), as given in 3.1.1.a

$= (215-140 f_B)/k$ , max  $160/k(\text{N/mm}^2)$

Within  $0.4 L$  amidships

$= 160/k (\text{N/mm}^2)$  within  $0.1 L$  from ends.

Elsewhere  $a$  may be obtained by linear interpolation.

5.2.3 The section modulus 'Z' of bottom girder is not to be less than:-

$$Z = \frac{10^8 b p S^2}{m \sigma} + Z_c (\text{cm}^3)$$

Where,

$m = 10$  in general

$p$  = applicable design pressure ( $\text{kN/m}^2$ ), as given in 3.1.1

$a = (190-130f_B)k$ , max  $160/k(\text{N/mm}^2)$  for continuous longitudinal girders within  $0.4 L$  amidships.

$= 160/k (\text{N/mm}^2)$

For longitudinal girder within  $0.1 L$  from ends and for transverse girders in general.

Elsewhere  $a$  may be obtained by linear interpolation.

5.2.4 Tripping brackets are to be fitted in accordance with the requirements given in Ch.3, Section 4.4.4.

## Section 6

### Double Bottom

#### 6.1 General

6.1.1 Where double bottom spaces are used as tanks, the center girder is to be watertight unless the double bottom is divided by watertight side girders or the tanks are narrow.

The depth 'd' of the center girder is not to be less than: \_

$d = 250 + 20B + 50T$  (mm),

with a minimum of 650 (mm).

In case of vessels with considerable rise of floors the depth 'd' may have to be increased.

6.1.2 The thickness 't' of the bottom girders and floors is not to be less than:-

$t = (0.007d + 3) \text{ k}(\text{mm})$ .

6.1.3 The section modulus 'Z' of the stiffeners on girders and floors forming boundaries of double bottom tanks is not to be less than:-

$$Z = \frac{p l^2}{10 \sigma} + Z_c (\text{cm}^3) \text{ Where,}$$

$p$  = design pressure ( $\text{kN/m}^2$ ), as given in 3.2.1;

$$\sigma = (210 - 130 f_B)/k, \text{ max. } 160/k \text{ (N/mm}^2\text{) for longitudinal stiffeners within } 0.4L \text{ amidships}$$

$$= 160/k \text{ (N/mm}^2\text{)}$$

For longitudinal stiffeners within. 0.1 L from ends and for transverse or vertical stiffeners in general. Between the regions specified above  $\sigma$  for longitudinal stiffeners may be obtained by linear interpolation.

Longitudinal stiffeners are to have end connections, other stiffeners may be sniped at ends provided the section modulus Z increased by 50 percent.

- 6.1.4 The longitudinal girders are to be satisfactorily stiffened against buckling in accordance with the requirements given in Ch.3, Sec. 6.

## 6.2 Transverse framing

- 6.2.1 The side girders are normally to be fitted at a spacing not exceeding 4.0 (m) and are to be extended as far forward and aft as practicable. The girders are to be stiffened at every bracket floor by a vertical stiffeners of depth same as that of reverse frame and thickness that of the girder.
- 6.2.2 Plate floors are to be fitted under bulkheads, pillars, thrust seating, boiler bearers and in way of change of depth of double bottom. In engine room plate floors are to be fitted at every frame, Elsewhere plate floors are to be fitted at least every fifth frame, the spacing not exceeding 3.0 (m).
- 6.2.3 Where bracket floors are fitted the section modulus 'Z' of the bottom frames and reverse frames is not to be less than:-

$$Z = \frac{sp l^2 k}{1.6} + 10^{-3} + Z_c (\text{cm}^3) \text{ where,}$$

p = applicable design pressure (kN/m<sup>2</sup>), as given in 3.1.1 and 3.3.1 for bottom frames and reverse frames respectively.

l = span of frames (m) measured between girder or brackets.

Where vertical struts according to 6.2.4 are fitted, the section modulus of bottom and reverse frames may be reduced by 35 percent.

- 6.2.4 The cross sectional area 'A' of the struts is not to be less than  $A = c \cdot k \cdot l \cdot s \cdot T. (\text{cm}^2)$  where,

$c = 7 \times 10^{-4}$  in way of ballast tanks.

$= 6 \times 10^{-4}$  elsewhere

l = actual span (m), without considering the strut.

The moment of inertia I of the struts is not to be less than:-



$l = 2.5 A \cdot d^2 \times 10^{-6} \text{ (cm}^4\text{) where,}$

$d = \text{depth of double bottom, (mm).}$

- 6.2.5 The bottom frames and reverse frames are to be attached to the centre girder and margin plate by means of brackets of same thickness as that of the plate floors. The breadth of the brackets is not to be less than 0.75 times the depth of the centre girder and the brackets are to be flanged 75 (mm) at their free edges.

### 6.3 Longitudinal framing

- 6.3.1 The side girders are normally to be fitted at a spacing not exceeding 5.0 (m) and are to be extended as far forward and aft as practicable.
- 6.3.2 The plate floors are to be fitted under bulkheads, pillars, thrust seating and boiler bearers. In engine room, plate floors are to be fitted at every second side frames. Additionally, under the main engine seating, floors extending to the first side girder outside the engine seating, are to be fitted at intermediate frames. The spacing of floors is normally not exceed 3.0 (m)
- 6.3.3 The plate floors are to be stiffened at every longitudinal by a vertical stiffener of depth same as that of the inner bottom longitudinal and thickness as that of the floor. Between plate floors, transverse brackets are to be fitted at every frame at the margin plate and at a spacing not exceeding 1.25 (m) on either side of the centre girder. The thickness of brackets is to be same as that of the plate floors. The brackets are to extend upto the adjacent longitudinal and are to be flanged 75 (mm) at their free edges.
- 6.3.4 The section modulus 'Z' of the bottom and inner bottom longitudinal is not to be less than:-

$$Z = \frac{5pl^2}{12\sigma} + Z_c(\text{cm}^3) \text{ where,}$$

$p = \text{applicable design pressure (kN/m}^2\text{), as given in 3.1.1 and 3.3.1 for bottom longitudinal and inner bottom longitudinal respectively:}$

$l = \text{span of longitudinal (m), measured between the plate floors.}$

$\sigma = (210 - 140 f_B)/K(\text{N/mm}^2)$ , maximum  $160/k (\text{N/mm}^2)$  for bottom longitudinal within 0.4 L amidships

$= (210 - 100 f_B)/k (\text{N/mm}^2)$ , maximum  $160/k (\text{N/mm}^2)$  for inner bottom longitudinal within 0.4 L amidships

$\sigma = 160/k (\text{N/mm}^2)$  within 0.1 L from ends.

Between the regions specified above,  $\sigma$  may be obtained by linear interpolation.

Where vertical struts according to 6.2.4 are fitted, the section modulus of the bottom and inner bottom longitudinal may be reduced by 35 percent.

## **Section 7**

### **Engine Seating**

#### **7.1 General**

- 7.1.1 It is recommended that the depth of the floors or double bottom in way of engine foundations be increased.
- 7.1.2 Sufficient fore and aft girders are to be arranged in way of the main machinery to effectively distribute its weight and to ensure adequate rigidity of the structure. The girders are generally to extend over the full length of the engine room and are to be suitably scarphed into the bottom structure beyond.
- 7.1.3 The scantlings of engine seating are to be adequate to resist gravitational, thrust, torque, dynamic and vibratory forces which may be imposed on them. The recommendations given by the engine manufacturer are also to be taken into account.
- 7.1.4 Where the top plate of the engine seating is situated above the floors or the inner bottom, adequate transverse strength by means of brackets in line with the floors is to be ensured. In way of the recess for crankcase, brackets as large as practicable are to be fitted.
- 7.1.5 Lightening holes in engine foundations are to be kept as small as practicable and the edges are to be suitably reinforced.

#### **7.2 Recommended scantlings**

- 7.2.1 For engines of power less than 1500 kW and RPM greater than 1200, the scantlings of engine girder face plate, web and floors in way of engine seating may be calculated as given below. Scantlings for other engines will be specifically considered.

Top plate area;  $A = 20 + 120 P/R$  ( $\text{cm}^2$ )

Thickness of top plate;  $t_p = 0.1A + 14$  (mm)

Girder web thickness;  $t_g = 0.043A + 7$  (mm)

Floor web thickness;  $t_r = 0.02A + 6$  (mm)

Where,

P = maximum power of the engine (kW)

R = rpm of engine at maximum power

**End of Chapter**

**Chapter 7**  
**Side Structure**  
**Contents**

**Section**

- 1 General
- 2 Structural Arrangement and Details
- 3 Design Loads
- 4 Side Shell Plating and Stiffeners
- 5 Girders

**Section 1**  
**General**

**1.1 Scope**

- 1.1.1 The scantlings and arrangement of side structure as defined in Ch. 1, Sec. 2 and also those of sides of the superstructures are to comply with the requirements of this Chapter.

**1.2 Symbols**

L, B, T, C<sub>b</sub>, k as defined in Ch. 1, Sec. 2

s = spacing of stiffeners, (mm).

l = span of stiffeners, (m).

b = spacing of girders, (m)

S = span of girders, (m)

t<sub>c</sub>, Z<sub>c</sub> = corrosion addition of thickness and section modulus respectively, as given in Ch. 3, Sec. 2.1

$$f_D = Z_R/Z_D$$

$$f_B = Z_R/Z_B$$

f<sub>s</sub> = f<sub>D</sub> for side shell area above neutral axis

= f<sub>B</sub> for side shell area below neutral axis

Where,

Z<sub>R</sub> = Rule mid-ship section modulus (cm<sup>3</sup>) as required by Ch.4.

Z<sub>D</sub>, Z<sub>B</sub> = Actual mid-ship section moduli (cm<sup>3</sup>) provided at deck and bottom respectively.

## **Section 2**

### **Structural Arrangement and Details**

#### **2.1 General**

- 2.1.1 The vessel's side shell may be stiffened longitudinally or vertically.
- 2.1.2 Where the side shell is stiffened longitudinally, the continuity of the side longitudinal within a distance of  $0.15D$  from bottom or from strength deck is to be maintained in accordance with Ch. 3, Sec. 5.1.1. The web frames are to be fitted with the bottom transverses or plate floors.
- 2.1.3 The position, shape and reinforcement of sea inlets or other openings in side shell are to be in accordance with the requirements of Ch. 4.
- 2.1.4 In the case of superstructures exceeding  $0.15 L$  in length and ending within  $0.5 L$  amidships, the side plating of the superstructures is to be increased by 25 percent in way of the break.
- 2.1.5 The thickness of the shell plating is to be increased locally by 50 percent in way of stern frame, propeller brackets and rudder horn, for reinforcements in way of anchor pockets, hawse pipes etc. refer to Ch. 13.
- 2.1.6 The weld connections are to comply with the requirements of Ch.14.

#### **2.2 Sheer strake**

- 2.2.1 The thickness of sheer strake as obtained from 4.1.3 is to be increased by 30 percent on each side of a superstructure end bulkhead located within  $0.5 L$  amidships if the superstructure deck is a partial strength deck.
- 2.2.2 Where a rounded sheer strake is adopted, the radius in general, is not to be less than 15 times the plate thickness.
- 2.2.3 Bulwarks are generally not to be welded to the top of the sheer strake within  $0.6L$  amidships.
- 2.2.4 Where the sheer strake extends above the deck stringer plate, the top edge of the sheer strake is to be kept free from notches and drainage openings if any, are to have smooth transition in the longitudinal direction.

### Section 3

#### Design Loads

#### 3.1 External pressure

3.1.1 The design pressure 'p' on side shell is to be taken as per Table 3.1.1

#### 3.2 Internal tank pressure

3.2.1 Where the side shell forms a boundary of a tank, the design pressure 'p' is to be taken as the greater of external pressure given by 3.1.1 and the internal tank pressure 'pi' given by 3.2.2.

3.2.2 The internal tank pressure 'pi' is to be taken as the greater of:-

$$p_i = 10 (h_s + 1) \text{ (kN/m}^2\text{)}, \text{ or}$$

$$= 6.7 h_p \text{ (kN/m}^2\text{)}$$

| <b>Table 3.1.1</b> |                       |  |   |
|--------------------|-----------------------|--|---|
| <b>Zone</b>        |                       | <b>Design pressure 'p' pN/m<sup>2</sup>)<sup>a</sup></b> |   |
|                    |                       | <b>For load points below the max. load waterline</b>     | <b>For load points above the max. load water line</b> |
| 1                  | L 60 (m)              | $10 h_o + (15 - h_o/T)$                                  | $15 - 10h_o$  |
| 2                  | L 20 (m) <sup>b</sup> | $10 h_o + (9 - 3h_o/T)$                                  | $9 - 10 h_o$  |
| 3                  |                       | $10 h_o + (5 - 2h_o/T)$                                  | 5   |

a) 'p' is not to be taken as less than 5(kN/m<sup>2</sup>)

b) For intermediate lengths (L) in Zone 1, the value of 'p' is to be linearly interpolated

$h^o$  = vertical distance (m), from the maximum load waterline to the load point.

Where,

$h_s$  = The vertical distance (m) from the load point to the top of tank

$h_p$  = Vertical distance (m), from the load point to the top of air pipe.

For very large tanks which may be partially filled, sloshing pressure may have to be considered.

## Section 4

### Side Shell Plating and Stiffeners

#### 4.1 Side shell plating

4.1.1 The thickness 't' of side shell is not to be less than:-

$$t = (4 + 0.04 L) \quad k = t_c(\text{mm})$$

4.1.2 The side shell plating is also to comply with the requirements of buckling strength given in Ch. 3, Sec. 6.

4.1.3 The breadth of the sheer strake is not to be less than 100 D (mm)

Where the thickness of the strength deck plating is greater than that required for side plating, the sheer strake thickness is not to be less than the mean of the two values.

#### 4.2 Side shell longitudinal

4.2.1 The section modulus 'Z' of side longitudinal is not to be less than

$$Z = spl^2/12\sigma + Z_c \text{ (cm}^3\text{) Where,}$$

P = applicable design pressure at midpoint of the span (kN/m<sup>2</sup>).

$\sigma = (215 - 145 fs)/k$ , maximum 160/k (N/mm<sup>2</sup>) for side longitudinal at deck / bottom level within 0.4 L amidships.

= 160/k (N/mm<sup>2</sup>) at neutral axis within 0.4 L amidships.

= 160/k (N/mm<sup>2</sup>) within 0.1 L from ends and at the level of short superstructure decks.

Between the regions specified above  $\sigma$  ' may be obtained by linear interpolation.

#### 4.3 Mainframes

4.3.1 The section modulus 'Z' of the main frames bracketed at both ends as per 4.3.2 is not to be less than:-

$$Z = spl^2/2400 + Z_c(\text{cm}^3) \text{ and}$$

$$= 5.5 \sqrt{L \cdot k} \text{ (cm}^3\text{)}$$

Where,

p = applicable design pressure at midpoint of the span or mean of the pressures at two ends, whichever is greater, (kN/m<sup>2</sup>).

4.3.2 Main frame brackets are to be as follows:-

Length of the bracket:-

- For upper bracket:- 70l(mm)

- For lower bracket:- 120

1(mm) Section modulus at end

(Including bracket):

- For upper bracket:-  $1.7Z(\text{cm}^3)$

- For lower bracket:- 2.0

$Z(\text{cm}^3)$  where,

$Z$  = section modulus of main frame as given in 4.3.1

Where the free edge of the bracket exceeds 40 times the bracket thickness, the brackets are to be flanged. The flange width is to be less 1/15 of the length of the free edge.

- 4.3.3 Brackets at ends of the main frame may be omitted provided the frame is carried through life supporting members and the section modulus obtained as per 4.3.1 is increased by 75 percent.

#### **4.4 Superstructure frames**

- 4.4.1 Superstructure frames located between the collision bulkhead and the after peak bulkhead are to have section modulus 'Z' not less than:-

$$Z = 0.005 S l^2 K (\text{cm}^3)$$

- 4.4.2 The lower end of the superstructure frame is to be connected to the bracket or frame below or else it is to be bracketed above the deck. The upper end is to be bracketed to the deck beam or longitudinal.

#### **4.5 Peak frames**

- 4.5.1 Vertical peak frames forward of the collision bulkhead and aft of the after peak bulkhead are to have section modulus 'Z' not less than.

$$Z = spl^2/1600 + Z_c(\text{cm}^3) \text{ and}$$

$$= 5.5 \sqrt{L \cdot K} (\text{cm}^3) \text{ Where,}$$

$p$  = applicable design pressure ( $\text{kN/m}^2$ ), as given in Sec. 3

- 4.5.2 Peak frames are to be bracketed at top and bottom and in way of side stringers, the connection is to be provided adequate shear strength.

### **Section 5**

#### **Girders**

##### **5.1 General**

- 5.1.1 Web frames are to be fitted in way of hatch end beams and deck transverses.
- 5.1.2 In the engine room, web frames are to be fitted at the forward and aft end of the engine and every 5<sup>th</sup> frame in general. The section modulus 'Z' of the web frames and

side stringers is to be obtained as per 5.1.5 taking 'b' as the mean of the web frame or stringer spacing respectively, on either side. The depth of the webs and stringers are not to be less than 2.5 times the depth of the ordinary frames. Adequate deep beams are to be provided in line with the web frames.

5.1.3 In peak spaces, side stringers supporting vertical peak frames are normally to be fitted at every 2.6 (m). The section modulus 'Z' of the stringers is to be obtained as per Sec. 5.1.5. The stringers are to be supported by web frames.

5.1.4 The scantlings of simple girders and web frames supporting frames and longitudinal are to be in accordance with 5.1.5. The scantlings of the complex girder system are to be based on a direct stress analysis. The buckling strength of cross ties where fitted, is to comply with the requirements given in Ch. 3, Sec. 6.

5.1.5 The section modulus 'Z' of simple girders and web frames is not to be less than:-

$$Z = \frac{b p s^2 \cdot 10^3}{m \sigma} + Z_c (\text{cm}^3) \text{ where,}$$

p = applicable design pressure (kN/m<sup>2</sup>), as given in Sec. 3.

m = 12 for continuous longitudinal girders with end attachments in accordance with Ch.3, Sec.5.

= 10 for other girders with end attachments in accordance with Ch.3, Sec. 5.

$\sigma = (190 - 45 f_s) \text{ k, max } 160/\text{k (N/mm}^2\text{)},$  for continuous longitudinal girders within 0.4 L amidships.

= 160/K (N/mm<sup>2</sup>) for longitudinal girders with 0. 1 L from ends and for web frames in general. Between the regions specified above, s may be obtained by linear interpolation.

5.1.6 The net cross sectional area 'A' of the girder web at ends is not to be less than

$A = (0.06 S b p k + 0.01 h t_c (\text{cm}^2))$  of stringers and upper ends of web frames

=  $0.08 S b p k + 0.01 h t_c (\text{cm}^2)$  for lower ends of the web frames.

Where,

h = girder height (mm).

5.1.7 Tripping brackets are to be fitted in accordance with the requirements given in Ch. 3, Sec. 4.4.4

**End of Chapter**



**Chapter 8**  
**Deck Structure**  
**Contents**

**Section**

- 1 General
- 2 Structural Arrangement and Details
- 3 Design Loads
- 4 Deck Plating and Stiffeners
- 5 Deck Girders and Pillars
- 6 Decks for Wheel Loading

**Section 1**

**General**

**1.1 Scope**

- 1.1.1 The scantlings and arrangement of deck structure as defined in Ch.1, Sec. 2 are to comply with the requirements given in this Chapter.

**Symbols**

L, B, T, C<sub>b</sub>, k as defined in Ch. 1, Sec. 2

s = spacing of stiffeners, (mm),

l = span of stiffeners, (m)

b = spacing of girders, (m)

S = span of girders, (m).

T<sub>c</sub>, Z<sub>c</sub> = Corrosion addition to thickness and section modulus respectively as given in Ch.3, Sec. 2.1

$$f_D = Z_R/Z_D$$

where,

Z<sub>R</sub> = Rule mid-ship section modulus (cm<sup>3</sup>), as required by Ch. 4.

Z<sub>D</sub> = actual mid-ship section modulus (cm<sup>3</sup>), provided at deck calculated as per Ch. 4.

## Section 2

### Structural Arrangement and Details

#### 2.1 General

- 2.1.1 In tankers, the deck is normally to be stiffened longitudinally in the cargo tank region, however, where L does not exceed 75 (m), consideration may be given to transversely stiffened decks.
- 2.1.2 The continuity of the deck longitudinal is to be maintained in accordance with Ch.3, Sec. 5.1.1
- 2.1.3 The deck within the line of hatchway openings is preferably to be stiffened transversely or alternatively the arrangements are to provide adequate transverse buckling strength. Where the deck outside the line of hatchway openings is framed longitudinally, the transverse beams or buckling stiffeners between the hatchways are to extend at least upto the second longitudinal from the hatch side or equivalent.
- 2.1.4 In vessels with large hatch openings, the effective cross-sectional area of the deck between the hatchways is to be sufficient to withstand the transverse load acting on the vessel's sides.
- 2.1.5 The weld connectors are to comply with the requirements of Ch.14.
- 2.1.6 Hatchway corners are to be of streamlined, elliptical or circular shape as given in Ch. 4. Where shapes other than the streamlined shape or equivalent are adopted, insert plates are to be fitted at the hatch corners in strength deck. The insert plates are to be 25 percent thicker than the deck plating outside the line of hatchways and are to extend as shown in Fig. 2.1.6. The butts of insert plates are to be well clear of those in coming.

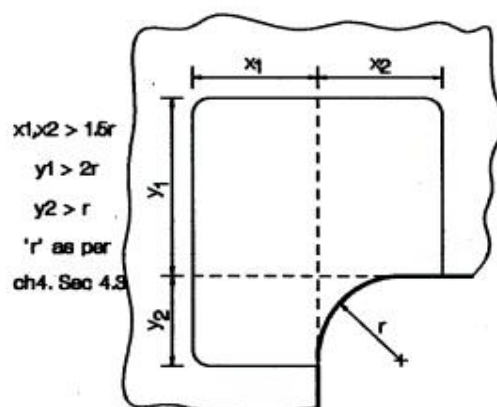


Fig.2.1.6 : Extent of insert plate

Figure

### 3.1 Weather deck

3.1.1 The design pressure 'p' on exposed decks is to be taken as:-

$$p = H_1 - 10 H_o \text{ (kN/m}^2\text{) minimum 5(kN/m}^2\text{) where,}$$

$H_o$  = vertical distance (m), from the maximum load waterline to the deck.

$H_1$  = as given in Table 3.1.1

| Table 3.1 |  |
|-----------|--|
| Zone      | $H_1$  |
| 1         | 9 for L ≤ 20 (m)<br>9 + 0.15 (L-20) for 20 < L < 60<br>15 for L ≥ 60 (m) |
| 2         | 9  |
| 3         | 5  |

3.1.2 for decks subjected to cargo loading the design pressure to be taken as:-

$$p = 12.5 q \text{ (kN/m}^2\text{)}$$

Where 'q' is deck cargo loading \* t/m<sup>2</sup>)

3.1.3 For weather decks forming crowns of tanks, the design pressure 'p' is to be taken as the greater of that given by 3.1.1 and 3.3.1

### 3.2 Accommodation decks

3.2.1 The design pressure 'p' on accommodation decks is to be taken as:-

$$p = 4.5 \text{ (kN/m}^2\text{)}$$

3.2.2 For decks forming crowns of tanks the design pressure 'p' is to be taken as the greater of that given by 3.2.1 and 3.3.1

### 3.3 Decks forming tank boundaries

3.3.1 The design pressure 'p' for decks forming the bottom or crown of a tank may be taken as the greater of the following:-

$$p = 6.7 h_p \text{ (kN/m}^2\text{) or}$$

$$= 10 (h_s + 1) \text{ (kN/m}^2\text{)}$$

Where,

$h_p$  = vertical distance (m), from the deck to the top of air pipe

$h_s$  = vertical distance (m), from the deck to the top of the tank

## Section 4

### Deck plating and Stiffeners

#### 4.1 Deck plating

- 4.1.1 The thickness of the strength deck plating outside the line of hatchway openings is to be adequate to give the necessary hull section modulus and moment of inertia required by Ch. 4.
- 4.1.2 The thickness 't' of deck plating is not to be less than:-  
 $t = (t_0 = 0.02L) \sqrt{k} + t_c(\text{mm})$  where,  
 $t_0 = 5$  for strength decks and forecastle decks  
 $= 4.0$  for other decks.
- 4.1.3 The strength deck plating outside the line of hatchways is also to comply with the requirements of buckling strength given in Ch. 3, Sec. 6.
- 4.1.4 In way of ends of bridges, poops and forecastles, the thickness of the strength deck stringer strake is to be increased by 20 percent over four frame spaces fore and also aft of the end bulkheads.

#### 4.2 Deck stiffeners

- 4.2.1 The section modulus 'Z' of deck longitudinal is not to be less  $\frac{spl^2}{12\sigma}$  than:  $Z = Z_c(\text{cm}^3)$  where,  
 $p =$  applicable design pressure ( $\text{kN/m}^2$ ) as given in Sec. 3  
 $\sigma = (215 - 145f_D.f_Z)k$ , max.  $160/k$  ( $\text{N/mm}^2$ ) for strength deck and decks of long superstructures / deckhouses within  $0.4 L$  amidships.  
 $= (215 - 145f_D.f_Z)k$ , max.  $160/k$  ( $\text{N/mm}^2$ ) for continuous decks below strength deck within  $0.4 L$  amidships.  
 $= 160/k$  ( $\text{N/mm}^2$ ) within  $0.1 L$  from ends and for short decks.  
Elsewhere,  $\sigma$  may be obtained by linear interpolation.  
The longitudinal are also to comply with the requirements of buckling strength given in Ch.3, Sec. 6.
- 4.2.2 The section modulus 'Z' of transverse beams is not to be less than:-  
 $Z = \frac{spl^2}{1600} + Z_c(\text{cm}^3)$  where,  
 $p =$  applicable design pressure ( $\text{kN/m}^2$ ) as given in Sec.3.

## Section 5

### Deck Girders and Pillars

#### 5.1 Girders

5.1.1 Deck girders and transverses are to be arranged in line with vertical members of scantlings sufficient to provide adequate support.

5.1.2 The scantlings of simple girders and transverses are to be accordance with 5.1.3. The scantlings of a complex girder system are to be based on a direct stress analysis.

5.1.3 The section modulus 'Z' of deck girders is not to be less than:-

$$Z = bpS^2 \cdot 10^2 / m\sigma + Z_c(\text{cm}^3) \text{ Where,}$$

p = applicable design pressure ( $\text{kN/m}^2$ ) as given in Sec. 3.

m = 12 for continuous longitudinal girders with end attachments in accordance with Ch.3

= 10 for other girders with end attachments in accordance with Ch.3

$\sigma = 190 - 145f_D.F_Z)k$ , max  $160/k$  ( $\text{N/mm}^2$ ) for continuous longitudinal girders without 0.4 L amidships

=  $160/k$  ( $\text{N/mm}^2$ ) for longitudinal girders within 0.1 L from ends and for transverse girders in general.

Elsewhere,  $\sigma'$  may be obtained by linear interpolation.

5.1.4 The net cross sectional area 'A' of the girder web at ends is not to be less than:-

$$A = 0.07 \cdot S.b.p k + 0.01ht_c(\text{cm}^2) \text{ where,}$$

h = girder height (mm).

5.1.5 The girders are to be satisfactorily stiffened against buckling in accordance with the requirements given in Ch.3, Sec. 6. Tripping brackets are to be fitted in accordance with the requirements given in Ch.3, Sec. 4.4.4

#### 5.2 Cantilevers

5.2.1 The scantlings of cantilever beams and supporting frames will be specially considered.

#### 5.3 Pillars

5.3.1 The scantlings of the pillars are to be in accordance with the requirements of Ch.3, Sec. 6. Axial load, if any from pillars above is to be added to the load from deck girders.

The minimum wall thickness 't'\*mm+, of the tubular pillars is not to be less than :-  
t = 4.5

$$+ 0.015d \quad \text{for } d < 300(\text{mm})$$

$$= 0.03d \quad \text{for } d \geq 300 (\text{mm})$$

Where,

$d$  = diameter of the pillar (mm).

- 5.3.2 Pillars are to be fitted in the same vertical line wherever possible, and arrangements are to be made to effectively distribute the load at the heads and heels. Where pillars support eccentric loads, they are to be strengthened for the additional bending moments imposed upon them. Doubling or insert plates are generally to be fitted at the head and heel of hollow pillars.
- 5.3.3 The pillars are to have a bearing fit and are to be attached to the head and heel plates by continuous welding.
- 5.3.4 Where the heels of hold pillars are not directly above the intersection of plate floors and girders, partial floors and intercostal girders are to be fitted as necessary to support the pillars. Lightening holes or manholes are not to be cut in the floors and girders below the heels of pillars.
- 5.3.5 Inside tanks, hollow pillars are not to be used and strengthening at the heels and heels of pillars is not to be obtained by means of doubling plates. Where hydrostatic pressure may give rise to tensile stresses in the pillars, their sectional area 'A' is not to be less than:-

$$A = 0.07 \cdot A_L \cdot p \text{ (cm}^2\text{)}$$

Where,

$p$  = design pressure as given in Sec. 3, causing the tensile stress in pillar

$A_L$  = load area of deck ( $\text{m}^2$ ), being supported by the pillar.

## Section 6

### Decks for Wheel Loading

#### 6.1 General

- 6.1.1 Where it is proposed either to stow wheeled vehicles on the deck or to use wheeled vehicles for cargo handling, the requirements of this section are to be complied with in addition to those given in the preceding sections.
- 6.1.2 The requirements given below are based on the assumption that the considered element (Deck plating and / or stiffener) is subjected to one load area only, and that the element is continuous over several evenly spaced supports. The requirements for other loads and / or boundary conditions will be specially considered.

A "load area" is the tire print area of individual wheels; for closely spaced wheels it may be taken as the enveloped area of the wheel group.

- 6.1.3 The details of wheel loadings are to be forwarded by the vessel builder. These details are to include the proposed arrangement and dimensions of tyre prints, axle and wheel spacing, maximum axle load and tyre pressure.

## 6.2 Wheel loads

- 6.2.1 The pressure 'p' from the wheels on deck is to be

12.sw/n.a.b. taken as  $p = 10^6 \text{ (kN/m}^2\text{)}$

- 6.2.1.1 for stowed vehicles in sailing condition:-

and  $p = w/n.a.b \text{ (} 9.81 + 3W/W \text{)} 10^6 \text{ (kN/m}^2\text{)}$

- 6.2.1.2 For cargo handling vehicles in harbor condition

Where,

W = maximum axle load, (t). For fork lift trucks, the total weight is to be taken as the axle load.

n = number of "load areas" per axle

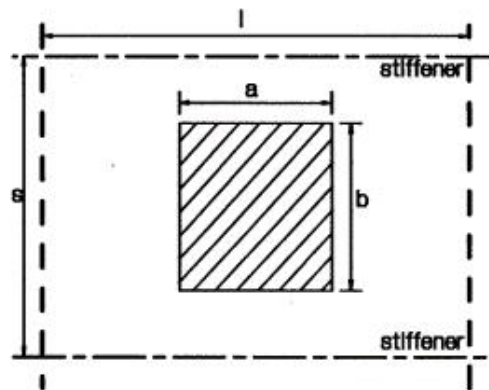


Fig.6.2.1 : Plate panel and load area dimensions

a = extent (mm), of the load area parallel to the stiffener (see Fig. 6.2.1)

b = extent (mm), of the load area perpendicular to the stiffener (see Fig. 6.2.1)

## Figure

## 6.3 Deck plating

- 6.3.1 The thickness 't' of deck plating subjected to wheel loading is not to be less than:-

$$t = C_1 f_a \sqrt{\frac{c_2 b s p k \cdot 10^{-3}}{m}} + t_c \text{ (mm) where,}$$

$f_a = (1.1 - 0.25 s/l)$  for  $s \leq 1$ , however need not be taken as greater than 1.0

a, b, s, l = deck panel dimensions (mm) (see Fig. 6.2.1)

$c_1 = 0.137$  in general for sailing conditions

= 0.127 in general harbor conditions

= As per Table 6.3.1 for upper deck within 0.4 L amidships.

| <b>Table 6.3.1 : c1 values for upper deck plating within 0.4 L amidships</b> |                           |                          |
|--|---------------------------|--------------------------|
| <b>Framing system</b>  | <b>Sailing conditions</b> | <b>Harbor conditions</b> |
| Longitudinal   | 0.145                     | 0.130                    |
| Transverse   | 0.180                     | 0.145                    |

For upper deck plating between 0.4 L amidships and 0.1 L from ends,  $C_1$  is to be varied linearly.

$$c2 = 1.3 \frac{4.2}{(a/s + 1.8)^2},$$

However, need not be taken as greater than 1.0

$$m = \frac{38}{(b/s)^2 - 4.7(b/s) + 6.5} \text{ for } b \leq S)$$

#### 6.4 Deck stiffeners

- 6.4.1 The section modulus 'Z' of deck beams and longitudinal subject to wheel loadings is not to be less than:-

$$Z = \frac{c_3 \cdot a \cdot b \cdot p \cdot 10^{-8}}{m \sigma} + Z_c (\text{cm}^3)$$

Where,

$c_3 = (1.15 - 0.25 b/s)$  for  $b \leq s$ , however need not be taken as greater than 1.0

$$m = \frac{r}{(a/l)^2 - 4.7(b/s) + 6.5}$$

$r = 29$  for continuous stiffeners supported at girders

= 38 when the continuous stiffeners can be considered as rigidly supported at girders against rotation.

$\sigma = 160/k$  ( $\text{N/mm}^2$ ) in general, for sailing conditions

=  $180/k$  ( $\text{N/mm}^2$ ) in general, for harbor conditions

= As per Table 6.4.1 for deck longitudinal between 0.4 L amidships and 0.1 L from ends,  $\sigma$  is to be varied linearly.

| <b>Table 6.4.1 – <math>\sigma</math> Values longitudinal within. 0.4 L amidships</b> |                                     |
|--|-------------------------------------|
| <b>Conditions</b>  | <b>(<math>\text{N/mm}^2</math>)</b> |
| Sailing  | $(215 - 145 f_D \cdot f_Z)k$        |
| Harbor   | $(225 - 90)$                        |

#### 6.5 Deck girders

- 6.5.1 The scantlings of girders will be specifically considered based on the most severe condition of moving or stowed vehicles. Also see Sec. 6.1.3

**End of Chapter**



**Chapter 9****Bulkheads****Contents****Section**

- 1 General
- 2 Subdivision and Arrangement
- 3 Structural Arrangement and Details
- 4 Design Loads
- 5 Plating and Stiffeners
- 6 Girders

**Section 1****General****1.1 Scope**

- 1.1.1 The requirements of this chapter cover the arrangement and scantlings of watertight and deep tank bulkheads.
- 1.1.2 The requirements also cover the non-watertight bulkheads and shaft tunnels.

**1.2 Statutory requirements**

- 1.2.1 Where applicable, the number and disposition of bulkheads are to be arranged to meet the requirements for subdivision, flood ability and damage stability in accordance with the requirements of the local or National Statutory Authority of the country in which the vessel is registered.

**1.3 Symbols**

L, B, T, C<sub>b</sub>, k as defined in Ch. 1, Sec. 2

s = spacing of stiffeners (mm)

l = span of stiffeners (m)

b = spacing of girders (m)

S = span of girders (m)

t<sub>c</sub>, Z<sub>c</sub> = corrosion additions to thickness and section modulus respectively as given in Ch.3, Sec. 2.1.

$$f_D = Z_R/Z_D$$

$$f_D = Z_R/Z_D$$

Where,

Z<sub>R</sub> = Rule mid-ship section modulus (cm<sup>3</sup>) as required by Ch. 4.

$Z_D$ ,  $Z$  = Actual mid-ship section moduli in ( $\text{Cm}^3$ ) provided at deck and bottom respectively calculated as per Ch. 4

$f_s = f_D$  for side shell area above neutral axis

$f_s = f_B$  for side shell area below neutral axis

## Section 2

### Subdivision and Arrangement

#### 2.1 Number of bulkheads

2.1.1 The following transverse watertight bulk-heads are to be fitted in all vessels:-

- A collision bulkhead;
- An aft peak bulkhead;
- A bulkhead at each end of the machinery space.

In vessels with machinery aft, the aft peak bulkhead may from the aft boundary of the machinery space. Additional transverse watertight bulkheads are to be fitted to ensure adequate transverse strength.

2.1.2 The ordinary transverse watertight bulk-heads in the holds should be spaced at reasonably uniform intervals. Where non uniform spacing is unavoidable and the length of a hold is unusually large, the transverse strength of the vessel is to be maintained by providing additional web frames, increased framing. etc.

#### 2.2 Position and height of bulkhead

2.2.1 The collision bulkhead is to be fitted at a distance of 0.04 L to 0.1 L from the F. P. Any recesses of steps in collision bulkheads are to fall within the limits.

2.2.2 Consideration will however be given to proposals for the collision bulkhead positioned aft of the limits given in 2.2.1, provided that the application is accompanied by calculations showing that with the vessel fully loaded to maximum draught on even keel, flooding of space forward of the collision bulkhead will not result in any part of the main deck becoming submerged, nor result in any unacceptable loss of stability.

2.2.3 All vessels are to have an after peak bulkhead generally enclosing the stern tube and rudder trunk in a watertight compartment, in twin screw vessels where the bossing ends forward of the after peak bulkhead, the stern tubes are to be enclosed in suitable watertight spaces.

2.2.4 The watertight bulkheads are in general to extend to the uppermost continuous deck.

- 2.2.5 For passenger vessels the number and position of the bulkheads will normally be governed by the requirements of trim and stability in damaged condition given in Pt.5, Ch.4.

### **2.3 Openings in watertight bulkheads and closing appliances**

- 2.3.1 Doors, manholes, permanent access openings or ventilation ducts are not to be cut in the collision bulkhead below the uppermost continuous decks.
- 2.3.2 Openings may be accepted in other watertight bulkheads provided that number and the size of openings is kept to a minimum compatible with the design and proper working of the vessel. Where penetrations of watertight bulkheads are necessary for access, piping, are to be made to maintain the watertight reinforcements re to be provided to ensure that the strength is at least equal to that of the unpierced bulkhead.

### **2.4 Cofferdams**

- 2.4.1 Cofferdams are to be provided between the following spaces to separate them from each other:-
- Tanks for fuel oil or lubricating oil
  - Tanks for edible oil
  - Tanks for fresh water and feed water.
- 2.4.2 Tanks for lubricating oil are also to be separated by cofferdams from those carrying fuel oil. However, these cofferdams need not be fitted provided that the common boundaries have full penetration welds and the head of oil is generally not in excess of that in the adjacent lubricating oil tanks.

## **Section 3**

### **Structural Arrangement and Details**

#### **3.1 General**

- 3.1.1 Oil fuel or oil carried as cargo in the deep tanks is to have a flash point of 60°C and above in closed up test. Where tanks are intended for other liquid cargoes of a special nature the scantlings and arrangements will be considered in relation to the nature of the cargo.
- 3.1.2 The continuity of bulkhead longitudinal within a distance of 0.15 D from the bottom or the strength deck is to be maintained in accordance with Ch.3, Sec. 5.1.1

3.1.3 Carlings, girders or floors are to be fitted below the corrugated bulkhead at their supports. These supporting members are to be aligned to the face plate strips of the corrugations.

3.1.4 The weld connections are to comply with the requirements of Ch. 16.

### **3.2 Wash bulkheads**

3.2.1 A centerline wash bulkhead is to be fitted in peak spaces used as tanks, where the breadth of the tank exceeds 0.5 B and also in deep tanks used for fuel oil extending from side to side.

3.2.3 The area of perforations is generally to be between 5% to 10% of the total area of bulkhead. The plating is to be suitably stiffened in way of the openings.

### **3.3 Supporting bulkheads**

3.3.1 Bulkheads or parts thereof supporting deck structure are also to be designed as pillars. The permissible axial loads and buckling strength are to be calculated in accordance with Ch.3, Sec.6. In calculating sectional properties the width of attached plating is not to be taken in excess of 40 times the plate thickness. Also see Ch. 8, Sec. 5.1.1.

## **Section 4**

### **Design Loads**

#### **4.1 Watertight bulkhead loads**

4.1.1 The design pressure 'p', for ordinary watertight bulkheads is given by:-

$$p = 10h(\text{kN/m}^2)$$

Where,

h = the vertical distance (m) from the load point to the uppermost continuous deck.

4.1.2 For bulkheads bounding cargo spaces intended to carry dry bulk cargoes, the design pressure 'p' is to be taken as the higher of that given in 4.1.1 and the pressure due to bulk cargo as given below:-

$$p = 12.5 C \rho h_c(\text{kN/m}^2)$$

Where

$\alpha$  = angle made by the panel under consideration with the horizontal plane (deg.)  $\delta$

= angle of repose of cargo (deg.) not to be taken greater than the following

- 20° for high bulk cargo (e.g. coal, grain)

- 25° for bulk cement cargo

- 35° for heavy bulk cargo (e.g. ore)

$h_c$  = vertical distance (m), from the load point to the mean horizontal plane corresponding to actual volume of cargo being considered.

$\rho$  = vertical distance (m), from the load point to the mean horizontal plane corresponding to actual volume of cargo being considered.

$\rho$  = density of cargo ( $t/m^3$ ).

For vessels designed to carry heavy bulk cargoes which are also required to carry lighter cargoes, the pressure 'p' based on maximum mass of cargo to be carried in the hold and fitted up to the top of hatch coaming would also require to be considered.

#### **4.2 Tank bulkhead loads**

4.2.1 The design pressure 'p' for tank bulkheads are normally to be taken as the greater of

$$p = 12.5 h_s (\text{kN/m}^2)$$

$$= 6.7 h_p (\text{kN/m}^2)$$

$$= 10 (h_s + 1) (\text{kN/m}^2)$$

Where,

$h_p$  = vertical distance (m) from the load point to the top of the air pipe.

$h_s$  = vertical distance (m) from the load point to the top of the tank or hatchway.

For very large tanks which may be partially filled, sloshing pressures may have to be considered.

4.2.2 The pressure 'p' on girder web panels in cargo tanks or ballast tanks is not to be taken as less than 20 ( $\text{kN/m}^2$ ).

#### **4.3 Wash bulkheads loads**

4.3.1 The design pressure 'p' for wash bulkheads may be taken as 50% of that for boundary bulkhead in the same location.

### **Section 5**

#### **Plating and Stiffeners**

##### **5.1 Bulkhead plating**

5.1.1 The thickness 't' of the bulkhead plating is not to be less than the minimum thickness given in 5.1.2 nor less than

$$t = 15.8s \frac{\sqrt{p}}{\sigma} \times 10^{-3} + t_c (\text{mm})$$

where,

p = applicable design pressure as given in Sec. 4

$\sigma$  = as per Table 5.1.1 for longitudinal bulkheads.

= 160/k for transverse tank bulkheads and collision bulkhead;

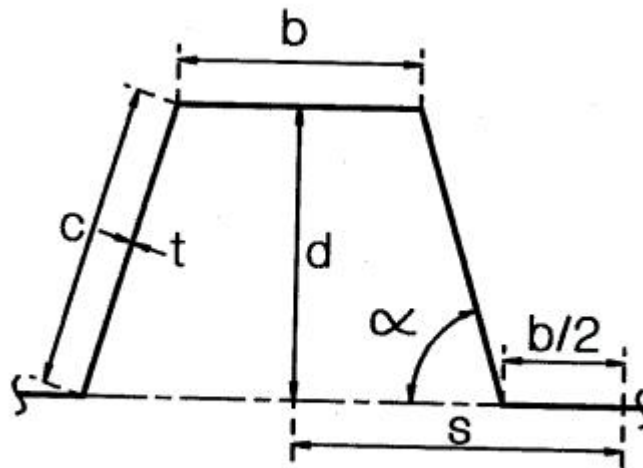
= 220/k for ordinary transverse watertight bulkheads.

= 190/k for transverse dry bulk cargo bulkheads

5.1.2 The minimum thickness requirement of the bulkhead plating is given by

$$T = (4.0 + 0.01L) + t_c(\text{mm})$$

5.1.3 The plate thickness of corrugated bulk head is not to be less than that required according to 5.1.1 and 5.1.2. The spacing 's' to be used in the calculating of the plating thickness is to be taken as the greater of 'b' or 'c' where 'b' and 'c' are indicated in Fig. 5.1.3.



**Fig.5.1.3 : Corrugated bulkhead**

**Figure**

For built up corrugation bulkheads, where the thickness of the flange and web are different, the thickness of the wider plating is also not to be less than:-

| <b>Table 5.1.1 : <math>\sigma</math> values for longitudinal bulkhead plating</b> |                |                 |                             |  |
|---|----------------|-----------------|-----------------------------|--|
| Region  | Framing system | At neutral axis | At strength deck or bottom  | Between neutral axis and strength deck or bottom |
| 0.4 L amidships   | Vertical       | 140/k           | (175-130 fs)k<br>max. 120/k | To be obtained by linear interpolation           |

|                           |   |       |   |  |
|---------------------------|---|-------|---|--|
|                           | Longitudinal  | 160/k | (1850-105 f <sub>s</sub> )k<br>max. 120/k | To be obtained<br>by linear<br>interpolation |
| Within 0.1 L<br>from ends | 160/k   | 160/k | 160/k                                     |  |
| Elsewhere                 | to be obtained by linear interpolation between allowable values at regions specified above. |       |   |  |

$$t = \sqrt{\frac{s^2 \cdot p}{2\sigma} - (t_a - t_c)^2} + t_c \text{ (mm)}$$

Where,

$t_a$  = thickness of adjacent plating (mm) not to be taken greater than  $t$ .

- 5.1.4 The longitudinal bulkhead plating within 0.1 D from bottom or strength deck is also to comply with the requirements of buckling strength given in Ch.3, Sec. 6.
- 5.1.5 In way of stern tubes, doubling plate of same thickness as the corresponding strake is to be fitted, or the strake thickness is to be increased by at least 60 percent.

## 5.2 Longitudinal

- 5.2.1 The section modulus of continuous longitudinal stiffeners and corrugations not to be less than:-

$$Z = \frac{p l^2}{m \sigma} + Z_c \text{ (cm}^3\text{)}$$

Where,

$p$  = applicable design pressure given in Sec. 4

$m = 12$

$\sigma = (215 - 145 f_s)/k$ , max. 160/k (N/mm<sup>2</sup>) at deck/bottom level within 0.4 L amidships

= 160/k at neutral axis within 0.4 L amidships.

= 160/k for longitudinal within 0.1 L from ends.

For longitudinal between the regions specified above  $\sigma$  may be obtained by linear interpolation.

- 5.2.2 The thickness of the web and flange is not to be less than the minimum plating thickness requirements stipulated in 5.1.2.
- 5.2.3 The rule section modulus of a corrugated bulkhead elements is to be obtained according to 5.2.1 taking 's' as shown in Fig. 5.1.3.

- 5.2.4 The actual section modulus of a corrugated bulkhead element may be obtained in accordance with the following:-

$$Z_{\text{actual}} = \frac{td(b+c/3)}{2000} (\text{cm}^3)$$

Where,

Where, t, d, b and c (mm), are as shown in Fig. 5.1.3.

### 5.3 Vertical and transverse stiffeners on tank bulkheads, collision bulkheads, dry bulk cargo bulkheads and wash bulkheads.

- 5.3.1 The section modulus of bulkhead stiffeners is not to be less than:-

$$Z = spl^2/m\sigma + Z_c(\text{cm}^3) \text{ where,}$$

p = applicable design pressure (kN/m<sup>2</sup>) given in Sec. 4.

m = 10 for transverse stiffeners and vertical stiffeners which may be considered fixed at both ends.

= 7.5 for vertical stiffeners simply supported at one of both ends.

= 10 for horizontal corrugation fixed at ends

= 13 for fixed upper end of vertical corrugation

= 20 for non-fixed upper end of vertical corrugation

= 10 for lower end of vertical corrugation

$\sigma = 160/k$  for tank bulkhead and collision bulkhead

=  $210/k$  for dry bulk cargo bulkheads.

- 5.3.2 The thickness of web and flange is to be as required in 5.1.2.

- 5.3.3 Actual section modulus of corrugation is to be obtained as per 5.2.4.

- 5.3.4 Brackets are normally to be fitted at the ends of non-continuous stiffeners. Where stiffeners are sniped at the ends, the thickness of plating supported by the stiffeners is not to be less than:-

$$t = 0.0395 \sqrt{[(1-0.0005s)s.p.k]} + t_c(\text{mm})$$

### 5.4 Vertical and transverse stiffeners on ordinary watertight bulkheads

- 5.4.1 The section modulus of bulkhead stiffeners is not to be less than

$$Z = spl^2/m\sigma$$

Where,

p = applicable design pressure given in Sec.4

m = 16 for stiffeners fixed at both ends.

= 12 for stiffeners fixed at one end (lower end in case of vertical stiffeners) and simply supported at the other end.

= 8 for stiffeners simply supported at both ends.

$\sigma = 220/k$



- 5.4.2 The thickness of web and flange is to be as required in 5.1.2. For sniped ends, the thickness of bulkhead plating is to be as per 5.3.4.
- 5.4.3 Actual section modulus of corrugations is to be obtained as per 5.2.4.

## Section 6

### Girders

#### 6.1 General

- 6.1.1 Bulkhead stringers and deep transverses are to be arranged in line with other primary supporting structure to the adjoining deck, side shell and bottom so as to facilitate the formation of continuous ring structures. Otherwise equivalent scarphing agreement is to be provided.
- 6.1.2 The section modulus requirement 'Z' of simple girders is not to be less than:-

$$Z = \frac{b.p.S^2 \times 10^2}{m\sigma} + Z_c \text{ [cm}^3\text{]}$$

Where,

m = 12 for continuous longitudinal girders with end attachments in accordance with Ch.3, Sec. 5.

= 10 for other girders with end attachments in accordance with Ch. 3, Sec. 5.

$\sigma = (190-45f_s)$ , max  $160/k(\text{N/mm}^2)$ , for continuous longitudinal girders within 0.4 L amidships.

=  $160/k (\text{N/mm}^2)$  for continuous longitudinal girders within 0.1 L from ends and for vertical or transverse girders on tank and collision bulkheads.

=  $210/k$  for vertical and transverse girders, in general.

For continuous longitudinal girders between the regions specified above,  $\sigma'$  may be obtained by liner interpolation.

- 6.1.3 The depth of the girders should not be less than 2.5 times the depth of the cutout (if any) for the passage of continuous stiffeners. The net cross sectional area 'A' of the girder web at ends is not to be less than.

$$A = CkSbp + 0.01 d_w t_c \text{ (cm}^2\text{)}$$

Where,

C = 0.060 for tank collision bulkheads

C = 0.045 for other watertight bulkheads

$d_w$  = depth of web (mm).

However, for lower end of vertical girders value of C to be taken as 0.08 and 0.06 respectively.

- 6.1.4 Tripping brackets are to be fitted in accordance with the requirements given in Ch.3, Sec. 4.

**End of Chapter**

**Chapter 10**  
**Superstructures, Deckhouses and Bulwarks**  
**Contents**

**Section**

- 1 General
- 2 Scantling
- 3 Structural Arrangement and Details
- 4 Bulwarks and Guard Rails

**Section 1**  
**General**

**1.1 Scope**

- 1.1.1 The scantlings of the bulwarks and of the exposed bulkheads of the superstructures and deckhouses are to comply with the requirements of this chapter. The scantlings of the decks of the superstructures and deckhouses are to be in accordance with the requirements of Ch. 8, and those of the sides of the superstructures are to be in accordance with the requirements of Ch. 7.

**1.2 Definitions**

- 1.2.1 For definitions of the terms 'Superstructure' and 'Deckhouse' refer to Ch. 1
- 1.2.2 The lowest tier is normally the tier that is directly situated on the deck to which the rule depth 'D' is measured or on superstructures which are less than 1.8 (m) in height.

**1.3 Symbols**

- 1.3.1 L and k as defined in Ch. 1, Sec. 2.  
s = spacing of stiffeners (mm) l =  
Span of stiffeners (m).

**Section 2**  
**Scantlings**

**2.1 End of bulkhead and exposed sides of deck houses**

- 2.1.1 The thickness 't' of steel plating of the fronts, sides and aft ends of deckhouses and the front and aft ends of superstructures is not to be less than:-

$$t = (0.004 s + 2.5) \sqrt{k} - \text{for lowest tier}$$

$$= (0.004 s + 1.5) \sqrt{k} - \text{for upper tiers}$$

- 2.1.2 The section modulus  $Z$  of stiffeners on fronts, sides and aft ends of deck houses and the front and ends of superstructures is not to be less than:-

$$Z = 3.6 s l^2 \times 10^{-3} \cdot k(\text{cm}^3) - \text{for uppermost tier}$$

$l$  is not to be taken less than 2.0 (m).

When a multiple tier erection is fitted, the section modulus of stiffeners on lower tiers is to be increased at the rate of 15% per tier fitted above the tier under consideration.

- 2.1.3 The upper end of stiffeners on all erections are to be bracketed to the deck beams or longitudinal and the lower end is to be welded to the deck below.

## **2.2 Protected machinery casings**

- 2.2.1 The thickness of plating is not to be less than:-

$$t = (0.003 S + \sqrt{k})(\text{mm})$$

- 2.2.2 The section modulus ' $Z$ ' of stiffeners is not to be less than:-

$$Z = 0.003 s l^2 \sqrt{k}(\text{cm}^3)$$

Where,  $l$  is not to be taken less than 2.0 (m).

- 2.2.3 Casings supporting one or more decks above are to be adequately strengthened.

## **Section 3**

### **Structural Arrangement and Details**

#### **3.1 Structural continuity**

- 3.1.1 Adequate transverse strength is to be provided to the deckhouses and superstructures by means of transverse bulkheads, girders and web frames.
- 3.1.2 The front end and the after end bulkheads of large superstructures and deckhouses are to be effectively supported below by a transverse bulkhead or by a combination of partial bulkheads, girders and pillars. Similarly, the exposed sides of various tiers of erections are to be supported by bulkheads, girders or carlings below.
- 3.1.3 All openings cut on the sides are to be substantially framed and have well rounded corners.
- 3.1.4 At the ends of superstructures, which have no set-in from the vessels' side, the side plating is to extend beyond the ends of the superstructures, and is to be gradually reduced in height down to the sheer strake. The extended plating is to be adequately stiffened, particularly at its upper edge.

## **Section 4**

### **Bulwarks and Guard Rails**

#### **4.1 General requirements**

- 4.1.1 Bulwarks or guard rails are to be provided on the exposed parts of the free board and superstructure decks and also on all upper deck spaces normally accessible to crew and passengers. The height of the bulwarks or guard rails measured above the sheathing, if any, should not be less than the following:-

For all passenger vessels:-

- For all Zones : 900(mm)

For all other vessels:-

- 1 For Zone 1 : 900(mm)
- 2 For Zone 2 : 600(mm)
- 3 For Zone 3 : 300(mm)

Consideration will be given to cases where this height would interfere with the normal operation of the vessel.

- 4.1.2 Bulwarks or guard rails as required by 4.1.1. may be dispensed with in way of hatch side coamings fitted with suitable handrails.
- 4.1.3 Where bulwarks on weather portion of freeboard decks or superstructure decks from wells, provision is to be made for rapidly freeing the decks of water.

#### **4.2 Bulwark construction**

- 4.2.1 Bulwarks are to be stiffened at the upper edge by a strong rail section and supported by stays from the deck, spaced not more than 2.0 (m) apart. Where bulwarks are cut in way of a gangway or other openings, stays of increased strength are to be fitted at the ends of the openings.

Bulwark stays are to be supported by, or are to be in line with, suitable under deck stiffening, which is to be connected by double continuous fillet welds in way of the bulwark stay connection.

Bulwarks are to be adequately strengthened in way of eye plates for cargo gear. In way of the mooring pipes, the plating is to be increased in thickness and also adequately stiffened.

- 4.2.2 Bulwarks are generally not to be welded to the top of the sheer strake within 0.6 L amidships and so arranged as to ensure their freedom from main structural stresses.

**4.3 Bulwarks scantlings**

- 4.3.1 The thickness of the bulwark plating is not to be less than 4.0 (mm).
- 4.3.2 The section modulus 'Z' at the bottom of the bulwark stay is not to be less than:-

$$Z = (33 + 0.44 L)h^2 s(\text{cm}^3)$$

where,

h = height of bulwark (m)

s = spacing of bulwark stays (m)

In the calculation of section modulus 'Z' only the material connected to the deck is to be included. The contribution from bulwark plating and / or stay flange may be considered depending upon the construction details.

**4.4 Guard rails**

- 4.4.1 The guard rails are to be supported by stanchions fitted not more than 3.0 (m) apart; At least every third stanchion is to be supported by a bracket or stay.
- 4.4.2 Lengths of chain may be accepted in lieu of guard rails if they are fitted between two fixed stanchions and / or bulwarks.
- 4.4.3 The clear opening below the lowest course of the guard rails is not to exceed 230 (mm).

**End of Chapter**

## **Chapter 11**

### **Openings and Closing Appliances, Ventilators, Air Pipes and Discharges**

#### **Contents**

#### **Section**

- 1 General
- 2 Hatch Coaming
- 3 Hatch Covers
- 4 Miscellaneous Openings
- 5 Ventilators
- 6 Air and Sounding Pipes
- 7 Scuppers and Sanitary Discharges

#### **Section 1**

##### **General**

#### **1.1 Scope**

- 1.1.1 This chapter applies to all vessel types in general. Additional requirements pertaining to special vessels types are given in Pt. 5.
- 1.1.2 The requirements of National or local authorities should also be applied, where relevant.
- 1.1.3 For the purpose of this section weather tightness of hatch covers means that closing appliances do not permit entry of water into the vessel which may prejudice the safety of the vessel under the navigational condition envisaged.

#### **Section 2**

##### **Hatch Coamings**

#### **2.1 Coaming heights**

- 2.1.1 The height of cargo hatch coamings above deck is to be not less than 300 (mm) for Zones 1 and 2 and 200 (mm) for Zone 3.  
In addition, the distance of coaming top above load water line is to be not less than given in Table. 2.1.1.

## 2.2 Hatch coaming construction

- 2.2.1 Hatch side coamings are to extend to the lower edge of the deck beams. Side coamings not forming a part of continuous girders, are to extend two frame spaces beyond the hatch ends below the deck.

| <b>Table 2.1.1 : Height of hatch coamings (mm)</b> |               |               |               |
|--|---------------|---------------|---------------|
|  | <b>Zone 1</b> | <b>Zone 2</b> | <b>Zone 3</b> |
| With weather tight hatch cover <sup>1)</sup>       | 1000          | 600           | 300           |
| Without water tight hatch cover                    | 1700          | 1000          | 500           |
| Note 1) See. 1.1.3                                 |               |               |               |

- 2.2.2 Hatch end coamings when not in line with the deck transverses are to extend below the deck, at least three longitudinal frame spaces beyond the side coamings.
- 2.2.4 Continuous hatchway coamings or coamings forming an effective part of the deck girder system are to be made from steel of same tensile strength as that of the deck plating.
- 2.2.5 If the junction of the hatch coamings forms a sharp corner, the side and end coamings are to be extended in the form of tapered brackets in longitudinal and transverse direction respectively.
- 2.2.6 Extension brackets or rails arranged approximately in line with the cargo hatch side coamings and intended for the stowage of steel hatch covers are not to be welded to deckhouse, mast house or to each other unless they form a part of the longitudinal strength members.

## 2.3 Coamings scantlings

- 2.3.1 The scantlings of hatch coaming plating and stiffeners are to be not less than that required for the adjacent deck.
- 2.3.2 Hatchway coamings 300 (mm) and above are to be stiffened in their upper edge. Coaming stays are to be fitted at spacing of not more than 3.0 (m). The stays are to end on stiffened plating. The coamings are to be satisfactorily stiffened against buckling.

### Section 3

#### Hatch Covers

#### 3.1 General

3.1.1 Hatch covers, where fitted, may be of the types a) to e) as described below.

##### Hatch cover types:-

- 'a': Steel plated cargo hatch covers stiffened by webs or stiffeners and secured by clamping devices. Weather tightness is to be ensured by means of gaskets. Hatch covers used for holds containing liquid cargoes are also included in this category.
- 'b': Steel plated pontoon type cargo hatch covers with internal webs and stiffeners extending over the full width of the hatchway. Weather-tightness is to be achieved by tarpaulins.
- 'c': Wood or steel hatch covers used in conjunction with the portable beams. Weather tightness to be obtained by tarpaulins.
- 'd': Access hatch covers for cargo oil tanks and adjacent spaced. The hatch covers are to be of steel and gasketed.
- 'e': Access hatch covers other than 'd'. The covers are to be of steel or wood and weather tight. Escape hatches are to be operable from both sides.

3.1.2 Materials for steel hatch covers are to satisfy the requirements of hull structural steel. Where other approved materials are used, equivalent strength and stiffness are to be provided.

#### 3.2 Design loads

3.2.1 The design weather load on the weather deck hatch covers is to be taken as:-

$$p = H_1 - 10 h_o (\text{kN/m}^2), \text{ minimum } 3 (\text{kN/m}^2)$$

where,

$h_o$  = Vertical distance (m) from the maximum load waterline to the top of hatch covers.

$H_1$  = as given in Table 3.2.1.

| Table 3.2.1 |  |
|-------------|--|
| Zone 1      | $H_1$  |
| 1           | 9 for $L \leq 20$ (m)<br>$9 + 0.15 (L-20)$ for $20 < L < 60$<br>15 for $L \geq 60$ m |



|   |   |
|---|---|
| 2 | 0 |
| 3 | 5 |

3.2.2 For hatch covers subjected to cargo loading the design pressure is to be taken as:-

$$p = 12.5 q (\text{kN/m}^2)$$

Where,

$q$  = specified cargo loading ( $\text{t/m}^2$ ) on the hatch cover.

3.2.3 The design internal pressure on hatch covers above tanks are to be determined as per the design pressure on deck structure given in Ch.8.

### 3.3 Hatch cover plating

3.3.1 The thickness of steel hatch cover plating is not to be less than:-

$$t = 15.8s \sqrt{p/\sigma} \times 10^{-3} + t_c (\text{mm}), \text{ or}$$

3 (mm) whichever is greater

where,

$p$  = design pressure as per 3.2

$$= 160/k (\text{N/mm}^2).$$

Hatch covers of G. I. sheet and other material will be specially considered.

3.3.2 The plating of hatch covers acting as compression flanges for the hatch cover stiffeners and girders is to be effectively stiffened against buckling.

In the middle part of the simple support span the critical buckling stress  $S_c$  is to be such that:-

$$\sigma_c = 1.15 \sigma_b (\text{N/mm}^2)$$

where,

$\sigma_b$  = calculated bending stress in the compression flange corresponding to the design load as given in e.2.

$\sigma_c$  = the critical buckling stress as per Ch.3, Sec. 6.

### 3.4 Stiffeners and girders

3.4.1 The section modulus of the stiffeners and girders is not to be less than following:-

$$Z = 6.25 spl^2/m (\text{cm}^3)$$

Where,

$l$  = the member span between effective supports (m)

$s$  = the member spacing (m)

$m$  = 8 for members simply supported at ends

= 12 for members which can be considered as fixed at both ends.

The moments of inertia of stiffeners and girders is not to be less than:

$$I = 2.1 ZI \text{ (cm}^4\text{)}$$

For other materials the requirement will be specially considered.

- 3.4.2 For covers above cargo and ballast tanks, fillet welds on tank side are to be double continuous.

### **3.5 Hatch cover edges**

- 3.5.1 The cover edges are to be adequately stiffened to withstand the forced imposed upon them during opening and closing of the hatches.

### **3.6 Wooden hatch covers**

- 3.6.1 Wooden hatch cover planks are to have a finished thickness not less than 1/24<sup>th</sup> of the unsupported span, with a minimum of 20 (mm). The planks of wood covers are to be connected at their underside by cross planks spaced not more than 1.5 (m).
- 3.6.2 The ends of all wooden hatch covers are to be protected by encircling with galvanized steel bands.

### **3.7 Portable hatch beams**

- 3.7.1 The section modulus and the moment of inertial of the portable hatch beams stiffened at their upper and lower edges by continuous flat bars are to satisfy the requirements of 3.4.
- 3.7.2 Carriers or sockets, or other suitable arrangements are to be provided as means of the efficient fitting and secured of portable hatch beams.
- 3.7.3 Sliding hatch beams are to be provided with an efficient device for locking them in their correct fore and aft position when the hatchway is closed.

### **3.8 Direct calculations**

- 3.8.1 Hatch covers of special construction and arrangement e.g. covers designed and constructed as a grillage, covers supported along more than two opposite edges and covers supporting other covers, may require submission of direct strength calculating taking into account the arrangement of stiffeners and the supporting members.

### **3.9 Hatch cover securing arrangement**

- 3.9.1 The gaskets and the securing arrangements are to be designed for the expected relative movement between cover and coaming or special devices are to be fitted to restrict such movement.
- 3.9.2 Securing arrangements together with suitable gasketing material are to ensure weather tightness of the covers to the satisfaction of the surveyors.

- 3.9.3 The gasket material is to be satisfactory air, sea water and if necessary oil resistant quality. It is to be effectively secured along the edges of the covers in a manner as to ensure that the forces from the hatch covers or cargo stowed on top of the hatch covers are transferred to the coaming or to the deck by direct contact without the load coaming on the gaskets. The sealing is to be achieved by relatively soft packing. The hatch coaming or steel parts on the adjacent covers in contact with the packing are to be well rounded where necessary,  
A metallic contact is to be kept between the hatch cover and the hull to effect electrical earthing.
- 3.9.4 Where tarpaulins are fitted to make hatch covers weather tight. They are to be free from jute, and are to be waterproof and of ample strength. At least two layers of tarpaulins are to be provided and these are to be secured by battens and wedges or equivalent arrangements.

## **Section 4**

### **Miscellaneous Openings**

#### **4.1 Manholes**

- 4.1.1 Manholes on the weather decks are to be closed by substantial covers capable of closing them watertight.

#### **4.2 Companionways, doors and accesses on weather decks**

- 4.2.1 Companionways on exposed decks are to be equivalent in strength and weather tightness to a deckhouse in the same portion. The height of the doorway stills above deck is not to be less than 100 (mm) for Zone 3 and 150 (mm) for Zone 1 & 2.

For doorways directly leading to engine room the sill height above deck is to be not less than 400 (mm). In addition the sill height above load waterline should not be less than the values mentioned below:-

|        |           |
|--------|-----------|
| Zone 1 | 1000 (mm) |
| Zone 2 | 600 (mm)  |
| Zone 3 | 300 (mm)  |

#### **4.3 Openings on engine casing**

- 4.3.1 Machinery space openings are to have efficient closing appliances. The openings and coamings for fiddley, funnel and machinery space ventilators in the casing in those positions are to be provided with strong covers of steel or other equivalent material

permanently attached in their proper positions and capable of being secured weather tight.

- 4.3.2 Skylights are to be of a substantial construction and secured firmly to the deck. For skylights the coaming height is not to be less than that required for the hatch coamings. Efficient means are to be provided for closing and securing the hinged scuttles, if any. The thickness of glasses in fixed or opening skylights is to be appropriate to their position and size as required for side scuttles. Glasses are to be protected against mechanical damage, and are to be fitted with deadlights, or storm covers permanently attached.

- 4.3.3 Side scuttles in the engine casings are to be provided with fireproof glass.

#### **4.4 Windows and side scuttles**

- 4.4.1 Side scuttles and windows are to be made and tested according to standards. The glass thickness of side scuttles below main deck is to be not less than 8.0 (mm).

The glass thickness of windows above deck to not be less than:-

$$t = \frac{w}{7} \text{ (mm), minimum of 6.0 (mm)}$$

where,

w = the height or the width of the window, whichever is smaller, (mm).

- 4.4.2 Side scuttles in the shell below main deck are to be non-opening type with deadlights and the lower edge of glass is to be at least 500 (mm) above the load water line in any condition of list or trim. Further, the scuttles are to be adequately protected against damage by direct contact.
- 4.4.3 Side scuttles and windows above deck may be fitted without deadlight / portable covers provided the height of lower edge of glass above waterline is not less than specified in Table 4.4.3.

| <b>Table 4.4.3 : Height of side scuttles (mm)</b> |                           |
|---|---------------------------|
| <b>Zone 1</b>                                     | <b>h<sub>t</sub> (mm)</b> |
| 1   | 1700                      |
| 2   | 1000                      |
| 3   | 50                        |

## **Section 5**

### **Ventilators**

#### **5.1 General**

- 5.1.1 The scantlings of exposed ventilator coamings are to be equivalent to the scantlings of deckhouses in the same position. In cargo spaces and other areas where mechanical damage is likely, the ventilator trunks are to be well protected.

#### **5.2 Coaming heights**

- 5.2.1 Ventilators on exposed decks are to have the lower edge of openings at a height of not less than 300 (mm) above deck.

In addition the height of lower edge of openings above waterline are to be not less than specified in Table 5.2.1.

| <b>Table 5.2.1 : Ventilator coaming heights (mm)</b> |                                |                                   |
|--|--------------------------------|-----------------------------------|
|  | <b>With closing appliances</b> | <b>Without closing appliances</b> |
| Zone 1   | 1000                           | 1700                              |
| Zone 2   | 600                            | 1000                              |
| Zone 3   | 300                            | 500                               |

#### **5.3 Closing appliances**

- 5.3.1 Ventilator openings are to be fitted with efficient weather tight closing appliances if applicable as specified in Table 5.2.1.

## **Section 6**

### **Air and Sounding Pipes**

#### **6.1 General**

- 6.1.1 Air and sounding pipes are to comply with the requirements of Pt. 4, Ch.2.
- 6.1.2 Striking plates of suitable thickness, or their equivalent, are to be fitted under all sounding pipes.
- 6.1.3 Air and sounding pipes leading through cargo containment areas or other spaces where mechanical damage is likely to occur, are to be well protected.

**6.2 Height of air pipes**

- 6.2.1 The height of air pipes from the upper surface of decks exposed to the weather, to the point from where water may have access below, is not normally to be less than 300 (mm).

The heights above load waterline of air pipes with and without closing appliances are not to be less than as specified in Table 5.2.1 for ventilators.

- 6.2.2 Lower heights may be approved in class where these are essential for the working of the vessel, providing closing appliances are of an approved automatic type.

**6.3 Closing appliances**

- 6.3.1 Permanently attached closing appliances to prevent free entry of water are to be fitted to all sounding pipes and for air pipes where required as per 6.2.1
- 6.3.2 Where the closing appliances are not of an automatic type, provision is to be made for relieving vacuum when the tanks are being pumped out.

**Section 7****Scuppers and Sanitary Discharges****7.1 General**

- 7.1.1 Scuppers sufficient in number and size to provide effective drainage are to be fitted in all decks.
- 7.1.2 Scuppers draining weather decks and spaces within superstructures or deckhouses not fitted with efficient weather tight doors are to be led overboard.
- 7.1.3 Scupper and discharges which drain spaces below the main deck, or spaces within intact superstructures or deckhouses on the main deck fitted with efficient weather tight doors, may be led to the bilges in case of scuppers, or to suitable sanitary tanks in the case of sanitary discharges. Alternatively, they may be led overboard provided that the spaces drained are above the load waterline, and the pipes are fitted with efficient and accessible means of preventing water from passing inboard as required in 7.2.1.
- 7.1.4 Scuppers and discharge pipes should not normally pass through fuel oil or cargo oil tanks. Where scuppers and discharge pipes pass, unavoidably, through fuel oil or cargo oil tanks, and are led through the shell within the tanks, the thickness of the piping should be at least the same thickness as rule shell plating in way, derived from the appropriate chapters.

Piping within tanks is to be tested in accordance with Pt. 4, Ch. 2 and Ch.3.

7.1.5 All piping is to be adequately supported.

## **7.2 Closing appliances**

7.2.1 Where the inboard end of scuppers and discharges are below main deck, normally a screw down non-return valve in an accessible location is to be fitted to prevent water from passing inboard.

Where the inboard end is above the main deck, a non-return valve is to be fitted at the shell, if the height of the inboard end above waterline is lower than the following:-

Zone 1 – 1000 (mm)

Zone 2 – 600 (mm)

Zone 3 – 300 (mm)

## **7.3 Materials for valves, fittings and pipes**

7.3.1 All shell fittings and valves required by 7.2 are to be of steel, bronze or other approved ductile materials; ordinary cast iron or similar materials is not acceptable.

7.3.2 All these items, if made of steel or other approved material with low corrosion resistance, are to be suitable protected against wastage.

7.3.3 The lengths of pipe attached to the shell fittings, elbow pieces or valves are to be for galvanized steel or other equivalent approved material.

**END OF CHAPTER**

**Chapter 12****Rudders****Contents****Section**

1. General
2. Arrangement and details
3. Design Loads
4. Rudder Blades
5. Rudder Stock and Pintles
6. Rudder Couplings

**Section 1****General****1.1 Scope**

The requirements of this Chapter apply to arrangement and scantlings of normal streamlined or plate rudders and their supporting structure. Rudder fitted with special features e.g. special profiles, fins, flaps, steering propellers etc. to increase the lift force will be specially considered.

**1.2 Material**

- 1.2.1 All materials used in the construction of the rudder are to be tested and approved in accordance with Pt.2. 'Materials' of the Rules and Rules for the Construction and Classification Steel Vessels (Main Rules).
- 1.2.2 Material grades for plates and sections for the rudder blade are to be selected as per Pt. 3, Ch. 2, Sec. 1.3.
- 1.2.3 Bearing materials for bushings are to be stainless steel, bronze, white metal, synthetic material or lignum vitae. If stainless steel is proposed to be used for liners or bushes for the rudder stocks and pintles, the chemical composition is to be submitted for approval.

Hardness of the material of the bushing is to be at least 65 Brinell lower than that of the liner or the rudder stock or pintle.

Synthetic bush materials are to be of approved type. Arrangement is to be provided for adequate supply of sea-water to these bearings.



### 1.3 Testing

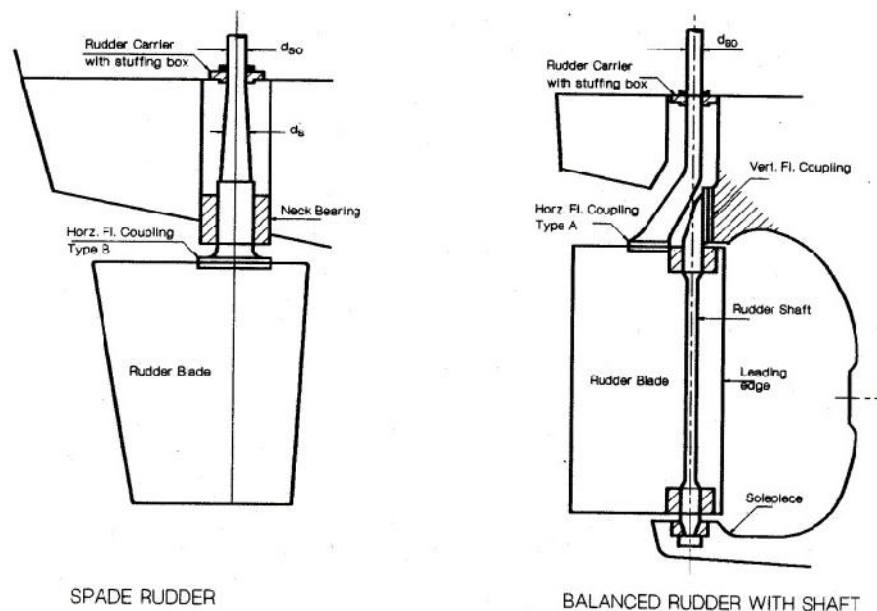
- 1.3.1 Bodies of the rudder are to be tested in accordance with the requirements given in Ch. 15.

## Section 2

### Arrangement and Details

#### 2.1 General

- 2.1.1 Various types rudder arrangement are shown in Fig 2.1.1; other combinations of couplings and bearing may, however, be proposed.



**Fig.2.1.1 : Types of rudders**

#### Figure

- 2.1.2 Effective means are to be provided for supporting the weight of the rudder. Where the support is provided by a carrier bearing attached to the rudder head, the structure in way of the bearing is to be adequately strengthened. The plating under all rudder head bearing or rudder carriers is to be increased in thickness.
- 2.1.3 All rudder bearings are to be accessible for measuring water without lifting or unshipping the rudder.
- 2.1.4 Satisfactory arrangement is to be provided to prevent water from entering the steering gear compartment and lubricant from being washed away from the rudder carrier. A seal or stuffing box is to be fitted above the deepest load water line for this purpose

unless the top of the rudder trunk (steering gear flat) is more than 300 (mm) above the deepest waterline in way trimmed condition. When the rudder carrier is fitted below the deepest load water line, two separate seals or stuffing boxes are to be provided.

- 2.1.5 Suitable arrangement is to be provided to prevent the rudder from lifting and accidental unshipping.

### Section 3

#### Design Loads

#### 3.1 Rudder force

- 3.1.1 The rudder force, upon which rudder scantlings are to be based, is to be determined from the following formula:-

$$F_r = 132 \cdot K_1 \cdot K_2 \cdot K_3 \cdot A \cdot V^2 (N) \text{ Where,}$$

$F_r$  = rudder force (N)

$A$  = area of rudder blade ( $m^2$ )

$V$  = maximum achievable vessel speed (knots) in the lightest operating condition in which the rudder is fully immersed.  $V$  is not to be taken as less than 6 knots.

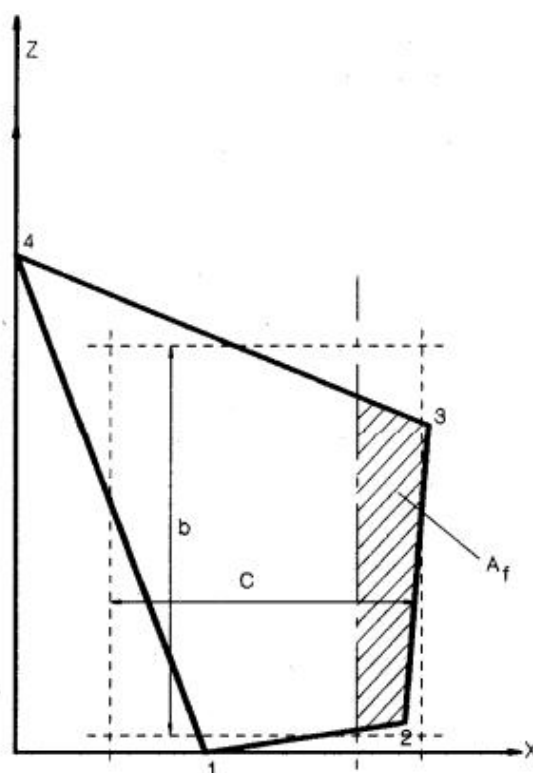
For astern condition, the maximum astern speed is to be used, but in no case less than:-

$$V_{\text{astern}} = 0.5V$$

$K_1 = (\lambda + 2)/3$ ; with  $\lambda$  not to be taken greater than 2.

$\lambda = b^2/A_t$  where  $b$  is the mean height of the rudder area (m) and  $A_t$ , the sum of rudder blade area and area of rudder post or rudder horn, if any, within the height  $b(m^2)$

Mean breadth  $C$  (m) and mean height  $b$  (m) of rudder are calculated according to the co-ordinate system in Fig. 3.1.1.



**Fig.3.1.1 : Rudder dimensions**

**Figure**

$K_2$  = Factor depending on the kind of rudder profile as per Table 3.1.1.

$K_3 = 0.80$  for rudder outside the propeller jet.

$= 1.15$  for rudders behind a fixed propeller nozzle.

$= 1.0$  otherwise.

| <b>Table 3.1.1</b>           |                         |               |
|------------------------------|-------------------------|---------------|
| <b>Profile type</b>          | <b><math>K_2</math></b> |               |
|                              | <b>Ahead</b>            | <b>Astern</b> |
| NACA : 00 Gottingen profiles | 1.1                     | 0.80          |
| Hollow profiles              | 1.35                    | 0.90          |
| Flat side profiles           | 1.1                     | 0.90          |

### 3.2 Rudder torque

- 3.2.1 The rudder torque on regular shaped rudders in both ahead and astern conditions of travel is to be calculated as follows:-

$$Q_t = F_t \cdot r \text{ (N-m);}$$

Where,

$r = x_c - f \text{ (m);}$  but not to be taken less than  $0.1 C$ .

$x_c$  = the distance of the point of application of the design force  $F_r$  from the leading edge.

=  $0.33 C$  in ahead condition.

=  $0.66 C$  in astern condition.

$C$  = Mean breadth of the rudder (m) See Fig. 3.1.1.

$f = C \cdot A_f/A$  where  $A_f$  is the portion of the rudder blade area situated ahead of the centre line of the rudder stock.

- 3.2.2 In case of rudder blades with stepped contours the total rudder torque is to be obtained as follows:-

$$Q_f = \sum Q_n \text{ for } i = 1, 2, 3...$$

Where,

$Q_{ri} = F_{ri} \cdot r_i$ , individual torque component from each part  $A_i$  of the total rudder area.

$$F_{ri} = F_r \cdot A_i/A$$

$r_i = X_{ci} f_i$ ; but not to be taken less than  $0.1 C_i$ .

$X_{ci} f_i$  and  $C_i$  are to be taken as  $X_c$ ,  $f$  and  $C$  as in 3.2.1 for each discrete part except that for those rudder parts immediately aft of rudder horn  $X_{ci}$  is to be taken as  $0.25C_i$  and  $0.55C_i$  in ahead and astern conditions respectively.

### 3.3 Bending moments, shear forces and reactions

- 3.3.1 The bending moment (BM) and shear force (SF) distributions along the entire height of the rudder blade and rudder stock as well as the bearing reaction (R) may be obtained by direct calculation. The rudder is to be assumed as simply at the centers of the upper bearing and the neck bearing. In case of rudders supported by the sole piece or rudder horn the flexibility of the sole piece or rudder horn, and rudder and rudder stock is to be taken into consideration.

- 3.3.2 For common types of rudders, the following approximate values may be used:-

- **For balanced rudder with heel support:-**

$$BM = \frac{F \cdot b}{8} \text{ (N - m)}$$

at mid-height of the rudder blade;

$$= \frac{F \cdot b}{7} (N - m)$$

at center of neck bearing

$$SF = 0.6 F_r (N)$$

at top and bottom ends of the rudder blade;

$$= 0.1 F_r (N)$$

at mid-height of the rudder blade.

$$R = 0.6 F_r (N)$$

at the heel pintle bearing;

$$= 0.7 F_r (N)$$

at the neck bearing / stern pintle;

$$= 0.1 F_r (N)$$

at the upper bearing

- **For spade rudders:-**

$$BM = \frac{F_r A_1 b_1}{A} (N - m)$$

at any cross section below and including the neck bearing.

$$SF = \frac{F_r A_1}{A} (N)$$

at any cross section upon the center of the neck bearing.

$$R = \frac{b_2 + b_3}{b_2} \cdot F_r (N - m)$$

at the neck bearing;

$$= \frac{b_2}{b_3} \cdot F_r (N)$$

at upper bearing;

Where,

$A_1$  = rudder area below the cross section under consideration.

$b_1$  = vertical distance from the centroid of  $A_1$  to the cross section;

$b_2$  = vertical distance from the centroid of rudder area  $A$  to the center of the neck bearing, and

$b_3$  = vertical distance between the centers of the upper and lower bearings.

- 3.3.3 At upper bearing the bending moments are to be taken as zero and between the upper bearing and the neck bearing the bending moments may be varied linearly.

## Section 4

### Rudder Blades

#### 4.1 Construction

- 4.1.1 Care is to be taken to avoid notch effects and to maintain continuity of strength around cut-outs and openings in the side plating. The plating thickness is to be increased suitably and corners are to be well rounded and ground smooth.
- 4.1.2 Side plating and vertical webs transmitting the torque are to be welded to the coupling flange by full penetration welds.
- 4.1.3 In general, welds between plates and heavy places are to be made as full penetration welds, where back welding is not practicable, welding is to be performed against backing bar or equivalent.
- 4.1.4 Webs are to be connected to the side plating in accordance with Ch.14. Where fillet welding is not practicable, side plating is to be connected by means of slot welding to flat bars welded to the webs. Normally slots of length 75 (mm), breadth at least twice the side plating thickness and spaced 200 (mm) center to center will be accepted. The ends of the slots are to be well rounded. In areas subjected to large bending stresses, horizontal slots may require to be replaced by continuous weld.
- 4.1.5 Arrangement is to be provided to drain the rudder completely. Drain plugs are to be provided with efficient packing.
- 4.1.6 Internal surfaces of rudders are to be efficiently coated for corrosion resistance after completion of fabrication and testing. Where it is intended to fill the rudder with plastic foam. Details of the foam material are to be submitted.

#### 4.2 Double plated rudders

- 4.2.1 Thickness 't' of the rudder side, top and bottom plating is not to be less than:-

$$t = 5.5 s f_a \sqrt{T + \frac{F^r}{A} \cdot 10^{-4}} \cdot 10^{-3} + 2.5 \text{ (mm)}$$

Where,

$$f_a = \sqrt{1.1 - 0.5 \left( \frac{s}{1} \cdot l \right)^2} ; \text{ max } 1.00$$

s = the smaller of the distance between the horizontal or the vertical web plates (mm).

l = the larger of the distance between the horizontal or the vertical web plates (m).

The thickness 't' is however not to be less than the minimum side shell thickness as per Pt. 3, Ch. 7

For nose plates the thickness is to be increased to 1.25 t.

- 4.2.2 The thickness of the vertical and horizontal webs is not to be less than 70 percent of the requirement given in 4.2.1 with a minimum of 7 (mm).
- 4.2.3 The thickness of side plating and vertical webs forming the main piece may have to be increased locally in way of the coupling and cutouts or openings, if any.

### 4.3 Single plated rudders

- 4.3.1 Rudder blade thickness is not to be less than:-

$$t = 1.5 \cdot y \cdot V \cdot 10^{-3} + 2.5 \text{ (mm)}$$

where y is the spacing of horizontal arms (mm); and V, the speed in knots as per 3.1.1.

- 4.3.2 Rudder blade is to be stiffened by horizontal arms spaced not more than 1000 (mm) apart. The arms are to be efficiently attached to the main piece. The thickness of the arms is not to be less than the blade thickness. The section modulus of the arms in way of main piece is not to be less than:-

$$Z = 0.5 \cdot y \cdot x^2 V^2 \cdot 10^{-3} \text{ (cm}^3\text{)}$$

Where,

X is the distance from the center line of the stock to the after end of the rudder (m).

- 4.3.3 The diameter of the main piece at top end is not to be less than that of the lower rudder stock, and it may be gradually reduced towards lower end.

## Section 5

### Rudder Stock and Pintles

#### 5.1 Rudder stock

- 5.1.1 Diameter of the rudder stocks, when obtained by direct calculation, are normally to give an equivalent stress not exceeding 138 (N/mm<sup>2</sup>) i.e.

$$\sigma_e = \sqrt{\sigma^2 + 3\tau_t^2} \leq 138 \text{ (N/mm}^2\text{)}$$

Where,

$\sigma$  is the bending stress (N/mm<sup>2</sup>).

$\tau_t$  is the torsional shear stress (N/mm<sup>2</sup>).

This requirement is regardless of the liners; and both ahead and astern conditions are to be considered.

- 5.1.2 The diameter of the rudder stock at and above rudder carrier is given by:-

$$d_u = 4.0 \sqrt[3]{(Q_r)} \text{ (mm)}$$

- 5.1.3 The diameter of rudder stock at any other cross section is given by

$$d_s = d_u \sqrt[6]{\left(1 + \frac{4}{3} \cdot \frac{B^2}{Q_r^2}\right)} \text{ (mm)}$$

where BM is the bending moment at the cross section under consideration obtained as per 3.3.

- 5.1.4 The diameter of the rudder stock at neck bearing is to be maintained to a point as far as practicable above the top of the neck bearing and may subsequently be tapered to that required at the rudder carrier. The length of the taper is to be at least three times the reduction in diameter. Particular care is to be taken to avoid the formation of a notch at the upper end of the taper.
- 5.1.5 Sudden changes of section or sharp corners in way of the rudder coupling, jumping collars and shoulders for rudder carriers are to be avoided, jumping collars are not to be welded to the rudder stock. Keyways in the rudder stock are to have rounded ends and the corners at the base of the keyways are to be adequately ready used.

## 5.2 Pintles and bearings

- 5.2.1 The diameter  $d_p$  of the pintles, measured on the inside of liners where fitted, is not to be less than:-

$$d_p = 0.35 \sqrt{R} \text{ (mm)}$$

Where,

R = Reaction force (N) at the pintle bearing, obtained as per Sec. 3.3.

- 5.2.2 Pintles are to have a conical attachment to the gudgeons and the taper on diameter is generally to range between 1:8 to 1:12. The slugging nut is to be efficiently secured. An effective sealing against sea water is to be provided at both ends of the cone.
- 5.2.3 The length of pintle housing in the gudgeon is not to be less than the pintle diameter  $d_p$ . The thickness of the pintle housing is not to be less than  $0.25d_p$ .
- 5.2.4 Where liners are fitted to pintles, they are to be shrunk on or otherwise efficiently secured. If liners are to be shrunk on, the shrinkage allowance is to be indicated on the plans. Where liners are formed by stainless steel weld deposit, the pintles are to be of weldable quality steel, and details of the procedure are to be submitted. Bushing is to be effectively secured against movement.
- 5.2.5 Pintle clearances are normally to be as given in Table 5.2.5.
- Attention is to be paid to the manufacture's recommendations particularly where brush material requires pre-soaking.



| <b>Table 5.2.5 : Pintle Clearances</b> |  |
|--|--|
| - For metal bearing material           | 0.001 d <sub>p</sub> + 1.0 (mm)  |
| - For synthetic bearing material       | To be specially determined considering the swelling and internal expansion properties of the material, but not less than 1.5 (mm). |

5.2.6 The bearing pressure 'p' due to reaction 'R' on projected bearing area is not to exceed the values given in Table 5.2.6. For the purpose of this calculation, the bearing length is not to be taken greater than 1.2 times the rudder stock or pintle diameter measured outside of liners, if fitted. Higher values than given in the table may be taken on verification by tests.

| <b>Table 5.2.6 : Bearing pressure</b>  |                             |
|--|-----------------------------|
| <b>Bearing Materials</b>   | <b>P (N/mm<sup>2</sup>)</b> |
| Steel or bronze against lignum vitae   | 2.5                         |
| Steels against white metal, oil lubricated   | 4.5                         |
| Steel against synthetic material with hardness between 60 and 70 shore D <sup>(1)</sup>  | 5.5                         |
| Steel against stainless steel, bronze and hot pressed bronze-graphite materials  | 7.0                         |
| Note:- (1) Indentation hardness test at 23° C and with 50% moisture, according to a recognized standard, synthetic bearing materials to be of approved type. |                             |

## Section 6

### Rudder Couplings

#### 6.1 Horizontal bolted couplings

6.1.1 The diameter of the couplings bolts is not to be less than:—

$$d_b = 0.62 \frac{d_s^3}{n \cdot e_m} )^{1/2} \text{ (mm)}$$

Where,

d<sub>s</sub> = Rule stock diameter (mm) in way of the coupling flange;

n = total number of bolts;

e<sub>m</sub> = mean distance of the bolts axis from the center of the bolt system (mm).

- 6.1.2 Coupling bolts are to be fitted bolts and a minimum of six (6) bolts are to be provided. Their nuts are to be effectively locked.
- 6.1.3 Mean distance  $e_m$  from the center of the bolts to the center of the bolt system is not to be less than  $0.9 d_s$  (mm). In addition, where the coupling is subjected to bending stress the mean a thwart ship distance from the center of bolts to the longitudinal centerline of the coupling is not to be less than  $0.6 d_s$  (mm).
- 6.1.4 The thickness of coupling flanges is not to be less than the diameter of the coupling bolts.
- 6.1.5 The width of material outside the bolt holes is not to be less than  $0.67 d_b$  (mm).

## **6.2 Vertical flange couplings**

- 6.2.1 The diameter of the coupling bolts is not to be less than:-

$$d_b = 0.81 \left( \frac{d_s^3}{n} \right)^{1/2} \text{ (mm)}$$

where,

$d_s$  = Rule stock diameter (mm) in way of the coupling flange

$n$  = total number of bolts, not to be less than 8.

- 6.2.2 The first moments of area of the bolts about the center the coupling to be not less than:-

$$m = 0.00043 d_s^3 \text{ (cm}^3\text{)}$$

- 6.2.3 The thickness of the coupling flanges must be at least equal to the bolt diameter; and the width of the flange material outside the bolt holes must be greater than or equal to  $0.67 d_b$ .

**END OF CHAPTER**

**Chapter 13**  
**Anchoring and Mooring Equipment**  
**Contents**

**Section**

- 1 General
- 2 Structural Arrangement for Anchoring Equipment
- 3 Equipment Specification
- 4 Anchors
- 5 Anchor Chain Cables
- 6 Towlines and Mooring Lines
- 7 Windlass

**Section 1**  
**General**

**1.1 Introduction**

- 1.1.1 To entitle a vessel to the letter 'L' in her character of classification, anchoring and mooring equipment is to be provided in accordance with the requirements of this Chapter.

These requirements are based on maximum current of 8 (km/hr), wind speed of 25 (m/sec), water depth of 5-7 (m) and good holding ground conditions. Where environmental conditions are more onerous, special consideration will be required.

- 1.1.2 Except in case of tugs, towlines are not subject of classification and the details given in the equipment table are for guidance purpose only. However, for tugs intended for towing other vessels, having onboard suitable lines for the same purpose, the requirement of towline may be waived with written concurrence from the Owners.
- 1.1.3 Attention is drawn to any relevant requirements of the local authorities with which the vessel is to be registered.

**1.2 Documentation**

- 1.2.1 The arrangement of anchoring and mooring equipment and equipment number calculations are to be submitted for information.
- 1.2.2 Following details of the proposed equipment are to be submitted for approval:-
- 1) Number, weight, type and design of anchors.

- 2) Length, diameter, grade and type of chain cables.
- 3) Type and breaking load of steel and fiber ropes.

### **1.3 Symbols**

- 1.3.1 L, B, T as defined in Ch. 1, Sec. 2.

## **Section 2**

### **Structural Arrangement for Anchoring Equipment**

#### **2.1 General**

- 2.1.1 The anchors are normally to be housed in hawse pipes and anchor pockets of adequate size, scantlings and suitable form to prevent movement of anchor and chain due to wave action.

The arrangements are to provide an easy lead of chain cable from windlass to the anchors. Upon release of the brake, the anchors are to immediately start falling by their own weight. Substantial chafing lips are to be provided at shell and deck. These are to have sufficiently large, radiused faces to minimize the probability of cable links being subjected to large bending stresses. Alternatively, roller fairleads of suitable design may be fitted.

Alternative arrangements for housing of anchors will be specially considered.

- 2.1.2 The shell plating and framing in way of the hawse pipes are to be reinforced as necessary.

- 2.1.3 The chain locker is to have adequate capacity and depth to provide an easy direct lead for the cable into the chain pipes, when the cable is fully stowed. The chain pipes are to be suitable size and provided with chafing lips. The port and starboard cables are to have separate spaces. The chain lockers boundaries are to be watertight. Provisions are to be made to minimize the ingress of water to the chain locker in bad weather. Adequate arrangement for drainage of chain lockers is to be provided.

Provisions are to be made for securing the inboard ends of the chains to the structure. The strength of this attachment should be between 15 percent to 30 percent of the breaking strength of the chain cable. It is recommended that suitable arrangements be provided so that in an emergency the chain can be readily made to slip from an accessible position outside the chain locker.

- 2.1.4 The windlass and chain stoppers are to be efficiently bedded and secured to deck. The thickness of deck plating is to be increased in way of the windlass and chain stoppers and adequate stiffening underneath is to be provided.

### **Section 3**

#### **Equipment Specification**

##### **3.1 Equipment number**

- 3.1.1 The equipment number, EN, on which the requirements of equipment are based is to be calculated as follows:-

$$EN = \Delta^{2/3} + 0.1A$$

$\Delta$  = molded displacement, (t), corresponding to the maximum load water line.

A = area (m<sup>2</sup>) in profile view of the hull above the maximum load waterline, including super structure, deck houses, trunks and hatch coamings, which are within the Rule length of the vessel. Houses of breadth less than B/4 may be disregarded.

In the calculation of A, sheer and trim are to be ignored.

Parts of the windscreens or bulwarks which are more than 0.8 (m) in height are to be regarded as parts of houses when determining A.

##### **3.2 Equipment**

- 3.2.1 The anchors, chain cables, towlines and mooring lines for all vessels are to comply with Table 3.2.1, except where modified for particular vessel types as per 3.2.2 to 3.2.6 below.
- 3.2.2 For vessels without a sharp stem, a single anchor of twice the mass may be fitted in lieu of the two bower anchors required as per the table.
- 3.2.3 For all self-propelled vessels except tugs, operating on rivers where, in view of their length, they cannot safely turn for anchoring with the bow in an upstream direction, the mass of the stern anchor is to be twice that required as per the table.
- 3.2.4 For tugs intended for pushing or side tow operations, two stern anchors are to be provided and the mass of each anchor is to be based on EN calculated considering the complete barge train; but not less than 300 (kg.)
- 3.2.5 For tugs intended for towing operations only, stem anchors need not be provided; and for tugs intended for pushing operations only, bower anchors need not be provided.
- 3.2.6 For non-propelled vessels intended to be towed, two stern anchors of the tabular mass or one stern anchor of twice the mass are to be provided.

| <b>Table 3.2.1 : Equipment – Anchors, anchor cables, towlines and mooring lines</b> |  |   |   |   |
|---|--|---|---|---|
| <b>EN</b>   | <b>Stockless<br/>bower anchors,<br/>See Note 1<br/>mass (kg)</b> | <b>Stockless<br/>stern anchors<br/>See Note 2<br/>mass (kg)</b> | <b>Towline<br/>(Recommend<br/>ation) See<br/>Note 3</b> | <b>Mooring lines<br/>See Note 4</b>           |
|   |  |   | <b>Minimum<br/>breaking<br/>strength (kN)</b>           | <b>Minimum<br/>breaking<br/>strength (kN)</b> |
| 4 & 6   | 35   | -   | -   | -   |
| > 6 & 8   | 45   | -   | -   | -   |
| > 8 & 10  | 60   | -   | -   | 14  |
| > 10 & 12   | 70   | -   | -   | 17  |
| > 12 & 14   | 85   | -   | -   | 20  |
| > 14 & 17   | 100  | -   | -   | 24  |
| > 17 & 20   | 115  | -   | -   | 28  |
| > 20 & 25   | 145  | -   | 56  | 36  |
| > 25 & 30   | 175  | -   | 67  | 43  |
| > 30 & 40   | 230  | 115   | 90  | 57  |
| > 40 & 50   | 290  | 145   | 112   | 72  |
| > 50 & 60   | 345  | 175   | 134   | 86  |
| > 60 & 70   | 400  | 200   | 157   | 100   |
| > 70 & 80   | 460  | 230   | 179   | 115   |
| > 80 & 90   | 520  | 260   | 202   | 129   |
| > 90 & 100  | 575  | 290   | 224   | 143   |
| > 100 & 110   | 635  | 320   | 231   | 158   |
| > 110 & 120   | 690  | 345   | 238   | 175   |
| > 120 & 130   | 735  | 370   | 245   | 182   |
| > 130 & 140   | 780  | 390   | 252   | 187   |
| > 140 & 150   | 825  | 420   | 259   | 192   |
| > 150 & 160   | 870  | 435   | 266   | 197   |
| > 160 & 170   | 915  | 460   | 272   | 202   |
| > 170 & 180   | 960  | 480   | 279   | 208   |
| > 180 & 190   | 1000   | 500   | 286   | 213   |

|             |      |     |     |     |
|-------------|------|-----|-----|-----|
| > 190 & 200 | 1045 | 525 | 293 | 218 |
| > 200 & 210 | 1090 | 550 | 300 | 223 |
| > 210 & 220 | 1135 | 570 | 307 | 228 |
| > 220 & 230 | 1180 | 590 | 314 | 233 |
| > 230 & 240 | 1225 | 615 | 321 | 238 |
| > 240 & 250 | 1270 | 635 | 328 | 244 |
| > 250 & 260 | 1315 | 660 | 335 | 249 |
| > 260 & 270 | 1360 | 680 | 342 | 254 |
| > 270 & 280 | 1405 | 700 | 349 | 259 |
| > 280 & 290 | 1450 | 725 | 355 | 264 |
| > 290 & 300 | 1495 | 750 | 362 | 269 |

## Notes:-

1. Normally two stockless bower anchors are required but see 3.2.2
2. i) For self propelled vessels, see 3.2.3  
ii) For tugs, see 3.2.4 and 3.2.5  
iii) For non-propelled vessels being towed, see 3.2.6
3. The length of the towline is to be not less than given by the following formulae, as appropriate:-
  - a)  $L + 75$  (m) for vessels  
for which  $20 \leq EN \leq 160$
  - b)  $L + 100$  (m) for vessels  
for which  $EN \geq 160$ .

For tugs intended for towing the breaking strength of the towline not to be less than twice the maximum.
4. Two mooring lines are required for vessels for which EN is below 100 and three for vessels having larger values. The length of each wire in the mooring lines is to be not less than  $2.5 L$ , but need not be more than 100 (m).
5. The length of short or stud link chain cable for each bower anchor is to be not less than  $L + 10$  (m) with a minimum of 40 (m) and a maximum of 60 (m). The minimum breaking strength of the chosen diameter and grade of short or stud link chain cable or wire is to be not less than 0.343 times the mass of anchor (kg) in case of ordinary anchor and 0.458 times the mass of anchor (kg) in case of HH Panchor.

6. The length of cable for each stern anchor, on vessels for which  $EN > 30$  is to be not less than 40 (m).

## **Section 4**

### **ANCHORS**

#### **4.1 General**

- 4.1.1 Anchors are to be of an approved design and a type suitable for the intended service.
- 4.1.2 The mass of each bower anchor as required in Sec. 3 is for anchors of equal mass. The masses of individual anchors may vary  $\pm 7$  percent of the tabular masses, provided that the total mass of the anchors is not less than would have been required for anchors of equal mass. Where the maximum current expected in service differs considerably from 8 (km/h), the anchor weight required by Table 3.2.1 is to be suitably modified.
- 4.1.3 The mass of head, including pins and fittings, of an ordinary stockless anchor is not to be less than 60 percent of the total mass of the anchor.
- 4.1.4 The mass 'ex stock' of stocked bower or steam anchors is not to be less than 80 percent of the tabular mass of ordinary stockless bower anchors. The mass of the stock is to be 25 percent of the total mass of the anchor including the shackle etc. but excluding the stock.
- 4.1.5 When anchor s of a design approved for the designation 'High Holding Power' are used as bower anchors, the mass of each such anchor may be 75 percent of the tabular mass of ordinary stockless bower anchors. For approval of HHP anchors, see Pt. 3, Ch. 15, Cl. 4. 2 of *The Rules and Rules for the Construction and Classification of Steel Vessels (Main Rules)*.
- 4.1.6 Anchor shackles are to be of a design and material suitable to the service for which the anchor is intended.
- 4.1.7 Anchors and anchor shackles are to be manufactured and tested in accordance with the requirements of Pt. 2, Ch. 10 of *the Rules and Rules for the Construction and Classification of Steel Vessels (Main Rules)*.



## Section 5

### Anchor Chain Cables

#### 5.1 General

- 5.1.1 Chain cables may be either short link or stud link and of mild steel or special quality steel meeting the requirements of breaking strength and the length as given in Table 3.2.1. The required chain diameter is to be obtained by using tables of chain breaking strength given in Pt. 2, Ch. 10 of *the Rules and Rules for the Construction and Classification of Steel Vessels (Main Rules)*.
- 5.1.2 In conjunction with HHP anchors, only Grade CC2 or ISO Grade 40 chain cable is to be used, however, for HHP anchors having a mass of 300 (kg) or less, Grade CC1 chain cable may be accepted provided the diameter of Grade CC1 cable required is increased by five percent.
- 5.1.3 When desired by the Owners, steel wires may be used instead of chain cables. Steel wires are to have a breaking strength not less than that required for chain cables and their length is to be not less than 25 percent in excess of the length required for chain cable as per Table 3.2.1.

In such case it is recommended that a short length of chain or a swivel is fitted between the anchor and the wire rope.

#### 5.2 Manufacture and testing

- 5.2.1 Chain cables, steel wire ropes and shackles are to be manufactured and tested in accordance with the requirements of Pt. 2, Pt. 2, Ch. 10 of *the Rules and Rules for the Construction and Classification of Steel Vessels (Main Rules)*.

## Annexure – 1

### Section 6

#### Towlines and Mooring Lines

#### 6.1 General

- 6.1.1 Towlines and mooring lines may be of steel wire, natural fiber or synthetic fiber and are to be made by an approved manufacturer.
- 6.1.2 The number, length and breaking strength of towlines and mooring lines are to be as required by Sec. 3. Also see Sec. 1.1.2.
- 6.1.3 The lengths of individual mooring lines may be reduced by up to 10 percent of the tabular length, provided that the total length of mooring lines is not less than would have resulted had all lines been of equal tabular length.

6.1.4 The diameter of a fiber rope is not to be less than 20 (mm).

## **6.2 Manufacture and testing**

6.2.1 Steel wire ropes are to be manufactured and tested in accordance with the requirements of Pt. 2, Ch. 10 of *the Rules and Rules for the Construction and Classification of Steel Vessels (Main Rules)*.

## **6.3 Mooring arrangement**

6.3.1 Means are to be provided to enable mooring lines to be efficiently secured on board vessel by an adequate number of suitably placed bollards on either side of the vessel.

6.3.2 Mooring winches should be fitted with drum brakes of sufficient strength to prevent unreeling of the mooring lines.

6.3.3 Adequate stiffening is to be provided in way of Bollards, Mooring winches etc.

## **Section 7**

### **Windlass**

#### **7.1 General**

7.1.1 The requirements of 7.1.2 to 7.1.5 apply equally to bow and stern anchor winches.

7.1.2 On vessels equipped with anchors having a mass of over 50 (kg), windlass(es) of sufficient power and suitable for the type and size of chain cable are to be fitted. Arrangements for anchor davits will be specially considered.

7.1.3 The windlasses may be hand or power operated. Hand operated windlasses are acceptable only if effort required at the handle does not exceed 15 (kgf) for raising one anchor at a speed of not less than 2 (m/min) and making about 30 turns of the handle per minute.

7.1.4 A power operated windlass is to be capable of exerting, for a period not less than 30 minutes, a continuous duty pull of  $28 d_c^2$  (N) and to raise one anchor with chain cable at mean speed of not less than 9 (m/min),  $d_c$  (mm) being the diameter required for Grade CC1 chain cable.

7.1.5 Winches suitable for operation by hand as well as by external power are to be so constructed that the power drive cannot activate the hand drive.

#### **7.2 Testing**

7.2.1 After installation on board, anchoring tests are to be carried out to demonstrate satisfactory working.

### **End of Chapter**

## **Chapter 14**

### **Welding**

#### **Contents**

#### **Section**

- 1 General
- 2 Welding
- 3 Welded Connections

#### **Section 1**

##### **General**

#### **1.1 Scope**

- 1.1.1 Welded in steel hull construction of all types of vessels is to comply with the requirements of this Chapter.

Welding in aluminum structures will be specially considered.

#### **1.2 Documentation**

- 1.2.1 Connection details of the welded structural members, including type and size of welds are to be clearly indicated on the plans submitted for approval. An explanation of all symbols or abbreviations used in detailing the weld connections should be included on the plans.

Details of proposed welding procedure is to be submitted indicating preheating temperature and any post welding heat treatment, if employed. Extent to which automatic welding, including deep penetration welding, is to be employed should also be indicated.

#### **Section 2**

##### **Welding**

#### **2.1 Welders and supervision**

- 2.1.1 Welders are to be proficient in the type of work on which they are to be engaged. The records of their tests and qualifications are to be kept by the builders and made available to the Surveyors. A sufficient number of skilled supervisors are to be employed to ensure effective control at all stages of assembly and welding operations.

**2.2 Documentation**

- 2.2.1 Connection details of the welded structural members, including type and size of welds are to be clearly indicated on the plans submitted for approval. An explanation of all symbols or abbreviations used in detailing the weld connections should be included on the plans.

Details of proposed welding procedure is to be submitted indicating preheating temperature and any post welding heat treatment, if employed. Extent to which automatic welding, including deep penetration welding, is to be employed should also be indicated.

**Section 2****Welding****2.1 Welders and supervisors**

- 2.1.1 Welders are to be proficient in the type of work on which they are to be engaged. The records of their tests and qualifications are to be kept by the builders and made available to the Surveyors. A sufficient number of skilled supervisors are to be employed to ensure effective control at all stages of assembly and welding operations.

**2.2 Welding electrodes**

- 2.2.1 Electrodes and welding consumables approved by IRS in accordance with the requirements of Pt. 2, Ch. 11 and suitable for the types of joint and grade of steel, are to be used.
- 2.2.2 For the connection of two different grades of steel of the same tensile strength properties, electrodes suitable for the lower grade will be generally acceptable except at structural discontinuities or other points or stress connection.
- 2.2.3 For the connection of steel of different tensile strengths, the electrodes are to be suitable for the tensile strength of the component, on the basis of which the weld fillet size has been determined in Sect. 3.

**2.3 Preparation for welding**

- 2.3.1 The parts to be welded are to be fitted in accordance with the approved joint details. The edge preparation is to be accurate and uniform.

Means are to be provided for maintaining the parts to be welded, in correct position during the welding operations. Excessive force is not to be employed in aligning the parts before welding and the means employed in maintaining the alignment are to be

so arranged as to allow for expansion and contraction during the welding operation. All methods employed in correcting improper alignment are to be to the satisfaction of the Surveyor.

- 2.3.2 All surfaces to be welded are to be clean, dry and free from rust, scale and grease. The surface and boundaries of each run of deposit are to be thoroughly cleaned and freed from slag before the next run is applied. Before a manual sealing run is applied to the back of a weld, the original root material is to be gouged out to sound metal.
- 2.3.3 Tack welding is to be kept to a minimum, and where used, should be equal in quality to that of the finished welds. Any defective tack weld is to be cut out before completing the finished welds. Care is to be taken in removing the tack welds to ensure that the structure is not damaged in doing so.

## **2.4 Welding procedure**

- 2.4.1 Only approved welding procedures are to be used, See 2.5.
- 2.4.2 Structural arrangements are to be such as to allow adequate access for satisfactory completion of all welding operations. Welded joints are to be so arranged so as to facilitate down hand welding wherever possible.
- 2.4.3 The sequence of welding is to be so planned that any restraint during welding operations is reduced to a minimum. The ends of the frames and stiffeners should be left unattached to the plating at the subassembly stage until connecting welds are made, in the intersecting systems of plating, framing and stiffeners, at the erection stage.

Where a butt meets a seam, the welding of the seam should be interrupted well clear of the junction and not be continued until the butt is completed. Welding of the butt should continue past the open seam and the weld be chipped out for the seam to be welded straight through.

- 2.4.4 Adequate precautions are to be taken to ensure that the welding site is protected from the deleterious effects of high moisture, severe wind and extreme cold.

## **2.5 Approval of Procedures**

- 2.5.1 Unless previously approved, welding procedures are to be established by the yard and forwarded to IRS for approval. The welding procedure specifications are to include detailed description of the base material, primer, plate thickness range, joint / groove design, welding consumable, welding position, welding techniques, welding parameters, preheating / inter pass temperature and post heat treatment if any.

The welding for procedure qualification and subsequent testing, are to be witnessed by the IRS Surveyor.

## **2.6 Inspection of welds**

- 2.6.1 Effective arrangements are to be provided for the inspection of finished welds to ensure that all welding has been satisfactorily completed.
- 2.6.2 All finished welds are to be visually inspected and are to be sound, uniform and substantially free from slag inclusions, porosity, undercutting or other defects. Welds and adjacent base metal are to be free from injurious arc strikes.
- 2.6.3 For the examination of important structural welds, visual inspection is to be supplemented by radiography or other acceptable non-destructive crack or flaw detection methods. The extent of such examination is to be to the Surveyors' satisfaction, but particular attention is to be given to the following locations:-
  - a) Junction and crossing of seams and butts in strength deck, sheer strake, side and bottom shell within 0.4 L amidships.
  - b) Butts of keel plating and rounded sheer strake within 0.4 L amidships.
  - c) Insert plates in way of hatch openings on the strength deck.
  - d) Butt of longitudinal framing and longitudinal bulkhead stiffeners with 0.4 L amidships.
- 2.6.4 Defective sections of welds as found by visual or non-destructive examination or leakage under hydrostatic tests, are to be gouged out as necessary and carefully re-welded.

## **Section 3**

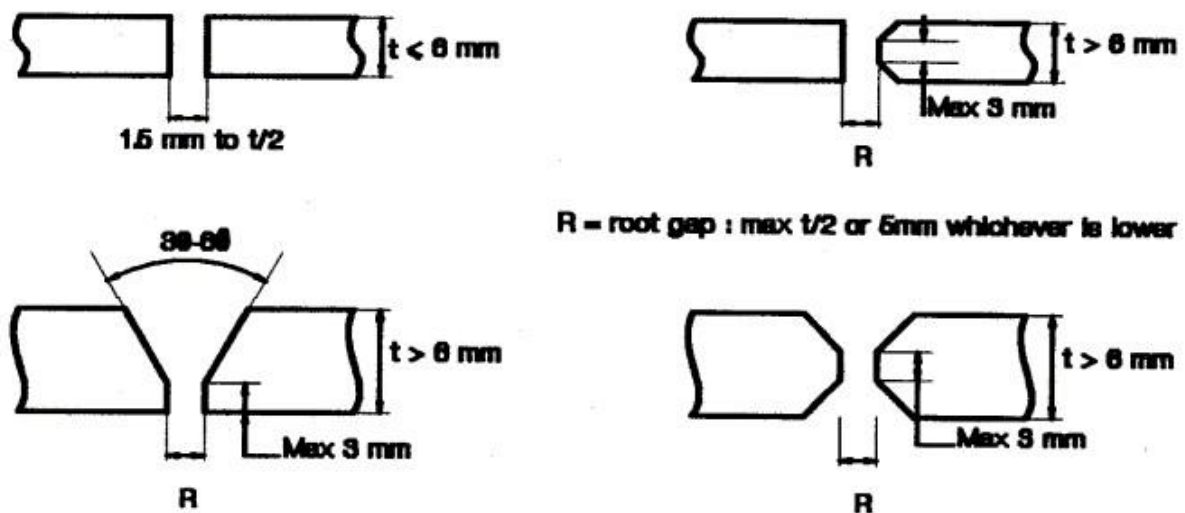
### **Welded Connections**

#### **3.1 Butt welds**

- 3.1.1 Plates of equal thickness may be manually butt welded as per Fig. 3.1.1. For automatic welding procedure will be specially considered.
- 3.1.2 For joints of plates with difference in thickness of more than 4 (mm), the thicker plate is to be tapered. The taper is not to exceed 1:3. Edge preparation after the tapering is to be as indicated in Sec. 3.1.1.
- 3.1.3 All manual butt welds are normally to be welded from both sides. Where a back ceiling run is not practicable or in certain cases when the stress level in the members

is very low, welding on one side may be permitted provided the welding process is found satisfactory.

- 3.1.4 Where stiffening members, attached by continuous fillet welds, cross the finished butt or seam welds, these welds are to be made flush in way of the faying surface. Similarly for butt welds in webs of stiffening members, the butt weld is to be first completed and made flush with the stiffening member before the stiffener is connected to the plating by filled weld. The ends of the flush portion are to run on smoothly without notches or any sudden change of section. Where such conditions cannot be complied with, a scallop is to be arranged in the web of the stiffening member. Scallops are to be of such size and in such a position, that a satisfactory weld can be made.



**Fig.3.1.1 : Manually welded butt joints**

### Figure

## 3.2 'T' Connections

- 3.2.1 The throat thickness (See Fig. 3.2.1) of the fillet welds is given by:-

$$\text{Throat thickness} = t_p \cdot \text{weld factor} \cdot d/s$$

$t_p$  = thickness (mm) of the thinner of the two parts being connected.

$d$  = distance (mm), between the successive weld fillets.

$s$  = length (mm), of the correctly proportioned weld fillets, clear of the end craters is not to be less than 75 (mm).

The weld factors for various connections are generally to be as given in Table – 3.2.1.

Where an approved automatic deep penetration procedure is used, the weld factors may be reduced by 15 percent.

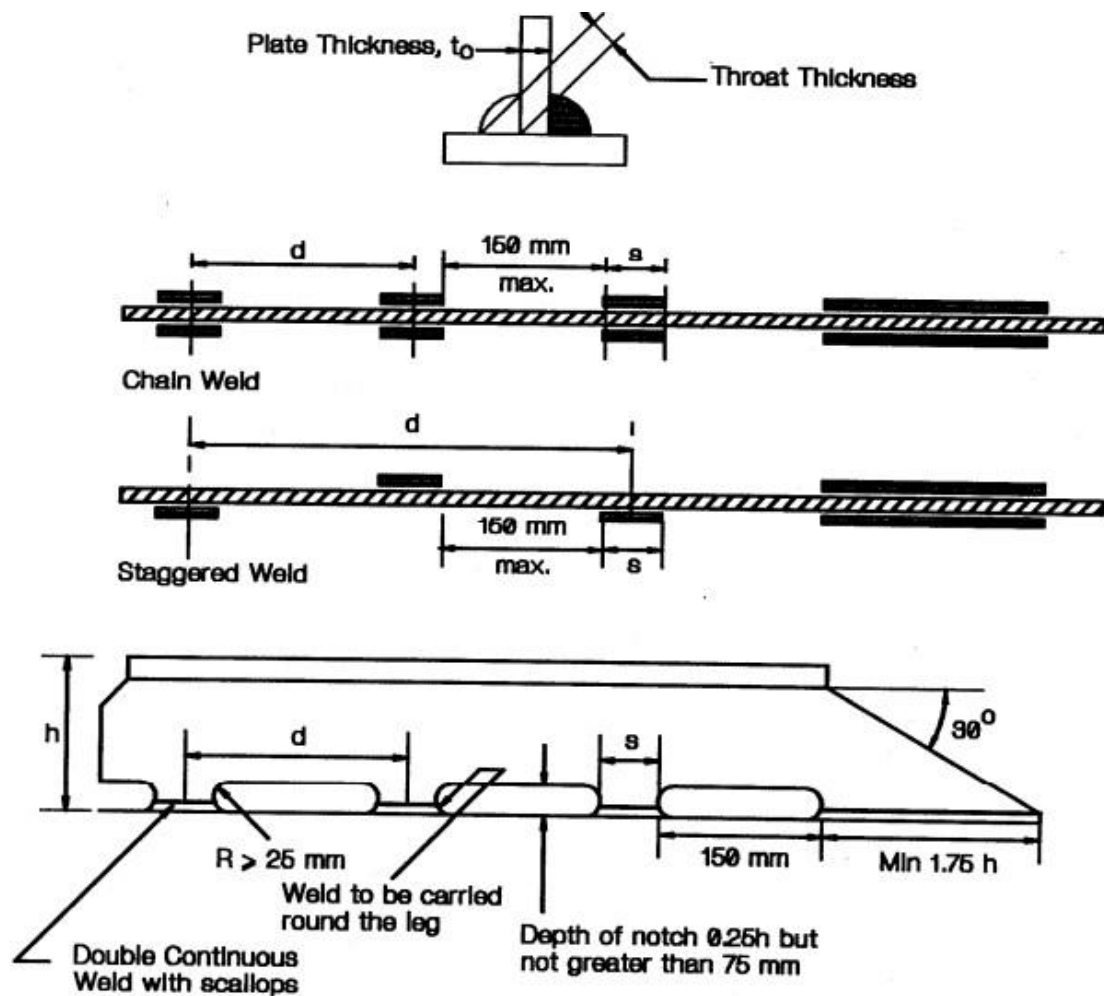


Fig.3.2.1 : Fillet welds

## Figure

3.2.2 The throat thickness is not to be less than 3.0 (mm) and generally not to be greater than  $0.44 t_p$  for double continuous welds and the greater of  $0.44 t_p$  or 4.5 (mm) for intermittent welds.

Table 3.2.1: Weld factors for fillet welds

|                      | Structural Items          | Weld Factors | d.c. | Int. weld | Remarks |
|----------------------|---------------------------|--------------|------|-----------|---------|
| <b>Single Bottom</b> |                           |              |      |           |         |
| Center girder        | to keel plate or bar keel | 0.3          | *    |           |         |
|                      | to face plate             | 0.15         |      | *         |         |
| Side girder          | to bottom shell           | 0.15         |      | *         |         |
|                      | to face plate             | 0.13         |      | *         |         |
|                      | to floors                 | 0.20         |      | *         |         |



|                            |                                |      |   |   |  |
|----------------------------|--------------------------------|------|---|---|--|
| Floors                     | to keel plate                  | 0.15 | * |   |  |
|                            | to shell plating               | 0.15 |   | * |  |
|                            | to center girder               | 0.35 | * |   |  |
|                            | to longitudinal bullheads      | 0.35 | * |   |  |
|                            | to face plate                  | 0.15 |   | * |  |
|                            | stern tube covering            | 0.15 | * |   |  |
| Bottom longitudinal        | to shell plating               | 0.13 |   | * |  |
| Double Bottom See Note 1   |                                |      |   |   |  |
| Center girder or duct keel | to keel plate                  | 0.3  | * |   |  |
|                            | to inner bottom                | 0.25 |   | * |  |
| Side girder                | to bottom shell                | 0.15 |   | * |  |
|                            | to inner bottom                | 0.15 |   | * |  |
|                            | to floors                      | 0.15 |   | * |  |
| Floors                     | to shell plating               | 0.15 |   | * |  |
|                            | to inner bottom / margin plate | 0.15 |   | * |  |
|                            | to center girder / keel plate  | 0.20 |   | * |  |
| Margin plate               | to shell plating               | 0.4  | * |   |  |
|                            | to inner bottom                | 0.4  | * |   |  |
| Inner bottom               | to side shell                  | 0.4  | * |   |  |
| Tank side brackets         | to shell plating               | 0.3  |   |   |  |
|                            | to margin plate                | 0.3  |   |   |  |
| Bracket floor              | to inner bottom / bottom shell | 0.15 |   |   |  |
|                            | to center girder               | 0.25 |   |   |  |
|                            | to side shell / margin plate   | 0.25 |   |   |  |
| Bottom frames              | to shell plating               | 0.13 |   |   |  |
| Reverse frames             | to inner bottom                | 0.13 |   |   |  |

|                                 |                       |      |   |   |  |
|---------------------------------|-----------------------|------|---|---|--|
| Longitudinal                    | to shell plating      | 0.13 |   |   |  |
|                                 | to inner bottom       | 0.13 |   |   |  |
| Tank boundaries and bilge wells |                       | 0.40 | * |   |  |
| Stiffeners                      | to floors and girders | 0.13 |   | * |  |

|                                     | Structural Items   | Weld Factors | d.c. | Int. weld | Remarks    |
|-------------------------------------|--|--------------|------|-----------|------------|
| <b>Structure in Machinery Space</b> |  |              |      |           |            |
| Floors and girders                  | to shell & inner bottom  | 0.3          | *    |           |            |
|                                     | to face plate  | 0.2          |      | *         |            |
| Transverse & longitudinal frames    | to shell plating   | 0.15         |      | *         |            |
| Floors                              | to center girder in way of engine, thrust blocks & boiler seating. |              |      |           |            |
|                                     | - in single bottom   | 0.50         | *    |           |            |
|                                     | - in double bottom   | 0.30         | *    |           |            |
| Main engine foundation girders      | to top plate   | 0.5          | *    |           | See note 2 |
|                                     | to hull structure  | 0.4          | *    |           |            |
| Floors                              | to engine girder   | 0.4          | *    |           |            |
| Brackets etc                        | to engine girders  | 0.3          | *    |           |            |
| <b>Side Structure</b>               |  |              |      |           |            |
| Transverse frames                   | To side shell  |              |      |           |            |
|                                     | - in tanks   | 0.13         |      |           |            |
|                                     | - elsewhere  | 0.11         |      |           |            |
| Side longitudinal                   | To shell plating   | 0.13         |      |           |            |

|                             |   |       |   |   |              |
|-----------------------------|---|-------|---|---|--------------|
| Web frames & side stringers | To shell plating  |       |   |   |              |
|                             | - within 0.2 x span from ends                                 | 0.35  | * |   |              |
|                             | - elsewhere   | 0.20  |   | * |              |
|                             | To face plate and tripping bracket                            | 0.15  |   | * |              |
| Web frames                  | To side stringers   | 0.3   | * |   |              |
| Bilge keel                  | To ground bars  | 0.2   | * |   |              |
| Bilge keel ground bar       | To side shell   | 0.35  | * |   | Single cont. |
| <b>Deck Structure</b>       |   |       |   |   |              |
| Strength deck               | to shell  | F. P. |   |   | See Note 3   |
| Other decks                 | To shell and bulkheads  | 0.3   | - |   | Generally    |
| Deck beams                  | To deck plating   |       |   |   |              |
|                             | - in tanks  | 0.13  |   | * |              |
|                             | - elsewhere   | 0.11  |   | * |              |
| Deck longitudinal           | to decks  | 0.13  |   | * |              |
| Deck girders                | to deck plating   |       |   |   |              |
|                             | - within 0.2 x span from ends                                 | 0.35  | * |   |              |
|                             | - elsewhere   | 0.20  |   | * |              |
|                             | to face plating and tripping brackets                         | 0.15  |   | * |              |
| Cantilever webs             | to shell, decks, face plates and longitudinal girders at ends | 0.35  | * |   |              |
| Pillars                     | to decks, inner bottom and pillar brackets                    | 0.40  | * |   |              |

|   | Structural Items   | Weld Factors | d.c. | Int. weld | Remarks   |
|---|--|--------------|------|-----------|---|
| <b>Construction of 0.25 L from F. P.</b>                |  |              |      |           |   |
| Floors and girders                                      | to shell & inner bottom                                    | 0.25         | *    |           |   |
|   | to face plate  | 0.25         |      | *         |   |
| Bottom longitudinal                                     | to shell plating   | 0.15         |      | *         |   |
| Shell   | to transverse & longitudinal side framing                  | 0.15         |      | *         |   |
| Panting stringers                                       | To shell & frames  | 0.30         | *    |           |   |
| All internal structure                                  | In fore peak (unless a higher factor is specified)         | 0.13         |      | *         |   |
| <b>Aft Peak Construction</b>                            |  |              |      |           |   |
| All internal structure                                  | On bottom, side shell & aft peak bulkhead                  | 0.3          | *    |           | See 3.2.5   |
| <b>Bulkheads and Partitions</b>                         |  |              |      |           |   |
| Boundaries of   | Watertight, oil tight and wash bulkheads and shaft tunnels | 0.4          | *    |           | To be specially considered for chemical cargo tanks |
| Stiffeners  | On tank & wash bulkheads                                   | 0.13         |      | *         |   |
|   | On pillar bulkheads  | 0.13         |      | *         |   |
|   | On ordinary bulkheads                                      | 0.11         |      | *         |   |
| Vertical & horizontal girders in tanks & wash bulkheads | To bulkhead plating  |              |      |           |   |

|  |  |      |   |   |  |
|--|--|------|---|---|--|
|  | - within 0.2 x span from ends                  | 0.40 | * |   |  |
|  | - elsewhere                                    | 0.40 |   | * |  |
|  | - to faceplate                                 | 0.30 |   | * |  |
|  | - to tripping brackets                         | 0.30 |   | * |  |
| Vertical & horizontal girders elsewhere  | to bulkhead plating                            | 0.15 |   |   |  |
|  | - within 0.2 x span from ends                  | 0.35 | * |   |  |
|  | - elsewhere                                    | 0.20 |   | * |  |
|  | to faceplate & tripping brackets               | 0.15 |   | * |  |
| <b>Primary Structures in Cargo Tanks</b> |  |      |   |   |  |
| Webs                                     | To shell deck & bulkheads                      |      |   |   |  |
|  | - within 0.2 x span from ends                  | 0.4  | * |   |  |
|  | - elsewhere                                    | 0.3  | * | * |  |
| Webs                                     | To face plates                                 | 0.3  | * |   |  |
| Webs                                     | - to webs of other primary members             | 0.3  | * |   |  |
| Boundaries                               | - to tripping brackets                         | 0.15 |   | * |  |
| <b>Superstructures &amp; deckhouses</b>  |  |      |   |   |  |
| External bulkheads                       | to deck  |      |   |   |  |
|  | - on 1 <sup>st</sup> and 2 <sup>nd</sup> tiers | 0.40 | * |   |  |
|  | - elsewhere                                    | 0.25 | * |   |  |
| Internal bulkheads                       | boundaries                                     | 0.13 |   | * |  |
| Stiffeners                               | to external bulkheads                          | 0.10 |   | * |  |

|   | Structural Items          | Weld Factors | d.c. | Int. weld | Remarks    |
|---|---------------------------|--------------|------|-----------|------------|
| <b>Hatchways and closing appliances</b>         |                           |              |      |           |            |
| Hatch coaming                                   | To deck all corners       | 0.5          | *    |           |            |
|   | To deck elsewhere         | 0.4          | *    |           |            |
|   | To face plate             | 0.4          | *    |           |            |
|   | To hatch cover rest bar   | 0.16         | *    |           |            |
| Hatch cover                                     | To stiffeners             | 0.12         |      | *         |            |
| <b>Rudders &amp; Nozzles</b>                    |                           |              |      |           |            |
| Rudders   |                           |              |      |           | See note 4 |
| Main piece members                              | To coupling flange        | F. P.        | *    |           |            |
|   | To each other             | 0.44         | *    |           |            |
| Rudder plating                                  | To rudder webs, elsewhere | 0.20         | *    |           |            |
| Nozzles   | Generally as for rudders  |              |      |           |            |
| <b>Miscellaneous fitting &amp; equipment</b>    |                           |              |      |           |            |
| Framing ring for manhole type covers            | To deck & bulkhead        | 0.4          | *    |           |            |
| Framing around ports and W. T. / out tight door | Plating                   | 0.4          | *    |           |            |
| Sea-chest boundary welds                        | To plating                | 0.4          | *    |           |            |
|   | elsewhere                 | 0.4          | *    |           |            |
| Ventilators, air pipes etc.                     | To deck                   | 0.4          | *    |           |            |
| Bulwark stays                                   | To deck                   | 0.4          | *    |           |            |
|   | To bulwark plating        | 0.2          |      | *         |            |

|  |  |       |  |  |  |
|--|--|-------|--|--|--|
| Fabricated anchors   |  | F. P. |  |  |  |
| Masts, derrick posts, crane pedestals, deck machinery & mooring equipment seating – to deck etc. | To be considered in each individual case   |       |  |  |  |
| d. c.  | double continuous  |       |  |  |  |
| F. p.  | Full penetration   |       |  |  |  |
| Note 1   | For tank boundaries see 3.2.5  |       |  |  |  |
| Note 2   | Preferably to be deep penetration or full penetration weld depending on the thickness of the engine girders. |       |  |  |  |
| Note 3   | Generally full penetration, but alternative proposals may be considered.                                     |       |  |  |  |
| Note 4   | See Chapter 12, Section 4.1  |       |  |  |  |

3.2.3 The leg length is not to be less than 2 times the specified throat thickness.

3.2.4 Where the connection is highly stressed, deep penetration or full penetration welding may be required. Where full penetration welding required, the abutting plate may require to be beveled.

3.2.5 Continuous welding is to be adopted in the following locations and in any other region of high dynamic loading:-

- a) Boundaries of weather tight decks and erections, including hatch coamings, companion ways and other openings.
- b) Boundaries of tanks and water tight compartments.
- c) All structures in the after peak and the after peak bulkheads stiffeners.
- d) All framing within holds of bulk carriers intended for carriage of coal.
- e) All welding inside tanks intended for chemicals or edible liquid cargoes.
- f) All lap welds in tanks.
- g) Primary and secondary members to plating in way of end connections and end brackets to plating in the case of lap connection.
- h) Other connections as given in Table 3.2.1.

3.2.6 Where intermittent welding is used, the welding is to be made continuous around the ends of brackets, lugs, scallops and at other orthogonal connections with other members. In tanks for water ballast, cargo oil or fresh water, only scalloped welding is to be used.

- 3.2.7 Where structural members pass through the boundary of a tank, and leakage into the adjacent space could be hazardous or undesirable, full penetration welding is to be adopted for the members for at least 150 (mm) on each side of the boundary. Alternatively, a small scallop of suitable shape may be cut in the member close to the boundary outside the compartment, and carefully welded all round.

### **3.3 Lap Connections**

- 3.3.1 Overlaps are not to be used to connect plates which may be subjected to high tensile or compressive loading. However, where they are adopted, the width of overlap is to be adequate to ensure a good weld, the surfaces are to be in close contact and the joints should be closed all round by continuous fillet weld.

### **3.4 Slot Weld**

- 3.4.1 For the connection of plating to internal webs, where access for welding is not practicable, the closing plating is to be attached by continuous full penetration or slot welds to flat bars fitted to the webs. Slots are to be well rounded at ends, to have a minimum length of 75 (mm) and in general, minimum width of twice the plating thickness. The distance between the slots is not to exceed 150 (mm). Complete filling of the slots is normally not permitted.

### **3.5 End connection**

- 3.5.1 In way of the end connections of girders double continuous welding is to be used all around. The weld area is not to be less than the cross-sectional area of the member, and the throat thickness not less than that given by Table 3.2.1 for girder ends.
- 3.5.2 Where stiffeners have bracketed end connections, bracket arms are to be welded all around and the throat thickness is not to be less than 0.35 times the thickness of brackets.
- 3.5.3 Where stiffeners are continuous at girders, they are to be connected to the webs, either directly and / or by means of lugs. The weld area is to be such that the shear stress does not exceed  $80/k$  ( $N/mm^2$ ). Where the shear forces are high, a double sided connection to the web and / or a web stiffener welded on top of the continuous stiffener may be required.

**End of chapter**



**Chapter 15**  
**Hull Inspection, Workmanship and Testing**  
**Contents**

**Section**

- 1 Hull Inspection
- 2 Workmanship
- 3 Testing

**Section 1**  
**Hull Inspection**

**1.1 Approval of works**

- 1.1.1 The builders, intending to class vessels to be build at their yard with classification society, are to demonstrate their capability to carry out the fabrication to acceptable quality standards before the commencement of the fabrication. Similar approval procedure shall apply to subcontractor's works also. Previous experience in the building and repair of relevant structures and equipment can be considered favorably in this regard.

**1.2 Inspection facilities**

- 1.2.1 Adequate facilities are to be provided to enable the Surveyor to carry out a satisfactory inspection of all components during each stage of prefabrication and construction.

**Section 2**  
**Workmanship**

**2.1 General**

- 2.1.1 All workmanship is to be good quality and in accordance with good ship building practice. Any defect is to be rectified to the satisfaction of the Surveyor before being covered with paint, cement or other composition.
- 2.1.2 The assembly sequence and welding sequence are to be agreed prior to construction and are to be to the satisfaction of the Surveyor.

**2.2 Plate edges and cut-outs**

- 2.2.1 Openings, holes and other cut-outs in the main structural components are to be rounded off by adequately large radii. The free edges of cut-outs, hatch corners etc. are to be properly prepared and are to be free from notches. All edges should be faired.

**2.3 Cold forming**

- 2.3.1 Flanging and bending of plates while cold forming are not to have an average bending radius less than three times the plating thickness. The minimum radius is not to be less than twice the plating thickness.
- 2.3.2 During joggling of plates and profiles, the depth of joggle is not to be less than four times and the bending radius not less than twice the web thickness.

**2.4 Hammering, bending and straightening**

- 2.4.1 Steel being worked on when hot, is not to be over heated, and it is to be hammered and bent in the appropriate heat condition. Steel which is burnt, is not to be used.
- 2.4.2 Flame heating may be employed to straighten buckled plating when the buckling is not severe.

**Section 3****Testing****3.1 Definitions**

- 3.1.1 *Shop primer* is a thin coating applied after surface preparation and prior to fabrication as a protection against corrosion during fabrication.
- Protective coating is a final coating protecting the structure from corrosion.
- 3.1.2 *Structural testing* is a hydrostatic test carried out to demonstrate the tightness of the tanks and the structural adequacy of the design. Where practical limitations prevail and hydrostatic testing is not feasible (for example when it is difficult, in practice, to apply the required head at the top of the tank), hydro-pneumatic testing may be carried out instead. When a hydro-pneumatic testing is performed, the conditions should simulate, as far as practicable, the actual loading of the tank.
- 3.1.3 *Hydro-pneumatic testing* is a combination of hydrostatic and air testing, consisting of filling the tank with water up to its top and applying an additional air pressure. The value of the additional air pressure is to be at least as defined in Sec. 3.4.

3.1.4 *Leak testing* is an air or other medium test carried out to demonstrate the tightness of the structure.

3.1.5 *Hose testing* is carried out to demonstrate the tightness of the structural items not subjected to hydrostatic or leak testing and to other components which contribute to the water tight or weather tight integrity of the hull.

### **3.2 Application**

The requirements of this Section apply to:-

- Tanks, including independent tanks
- Water tight or weather tight structures.

The purpose of these tests is to check the tightness and / or the strength of structural elements. Tests are to be carried out in the presence of the Surveyor at a stage sufficiently close to completion so that any subsequent work would not impair the strength and tightness of the structure.

For the general testing requirements, see Sec. 3.8 and Sec. 3.9.

### **3.3 Structural testing**

3.3.1 Structural testing as required in Table 3.3.1 may be carried out before or after launching. Shop primer may be applied before carrying out the structural testing.

3.3.2 Structural testing may be carried out after the protective coating has been applied, provided that one of the following two conditions is satisfied:-

- a) All the welds are completed and carefully inspected visually to the satisfaction of the Surveyor, prior to the application of the protective coating.
- b) Leak testing is carried out prior to the application of the protective coating.

However, when leak testing is not carried out, protective coating in way of the following welds should be applied only after the structural testing has been satisfactorily completed:-

- All erection welds, both manual and automatic.
- All manual fillet weld connections on tank boundaries and manual penetration welds.

### **3.4 Leak testing**

3.4.1 Where leak testing is carried out in accordance with Table 3.3.1, air pressure as indicated in Table 3.4.1 is to be applied during the test.

Prior to inspection, it is recommended that the air pressure in the tank is raised as indicated in Table 3.4.1 and kept at this level for about 1 hour to reach a stabilized

state, with a minimum number of personnel in the vicinity of the tank, and then lowered to the test pressure.

3.4.2 Welds are to be coated with an efficient indicating liquid.

3.4.3 A U-tube filled with water up to a height corresponding to the test pressure is to be fitted to avoid over pressure of the compartment tested and to verify the test pressure. The U-tube should have a cross section larger than that of the pipe supply in air.

In addition, the test pressure is also to be verified by means of one master pressure gauge. Alternative means which are considered to be equally reliable, may be accepted.

3.4.4 Where leak testing is carried out it should be prior to the application of a protective coating, on all fillet weld connections on tank boundaries, penetrations and erection welds on tank boundaries excepting welds made by automatic processes. Selected locations of automatic erection welds and pre-erection manual or automatic welds may require to be similarly tested at the discretion of the Surveyor, taking account of the quality control procedures operating in the shipyard. For other welds, leak testing may be carried out after the protective coating has been applied, provided that these welds were carefully inspected visually to the satisfaction of the Surveyor. Any other recognized method may be accepted to the satisfaction of the Surveyor.

### **3.5 Hose testing**

When hose testing is required to verify the tightness of the structures, as defined in Table 3.3.1, a minimum pressure in hose of at least  $0.2 \text{ (N/m}^2\text{)}$  is to be applied at a maximum distance of 1.5 (m). The nozzle diameter is not to be less than 12 (mm).

### **3.6 Hydro-pneumatic testing**

When hydro-pneumatic testing is performed, the same safety precautions as for leak testing (See Sec. 3.4) are to be adopted.

### **3.7 Other testing methods**

Other testing methods may be accepted, at the discretion of IRS, based upon equivalency considerations.

### **3.8 General testing requirements**

General requirements for testing are given in Table 3.3.1.

### **3.9 Additional requirements for special type vessels / tanks**

In addition to the requirements of Table 3.3.1, particular requirements for testing of certain spaces within the cargo area of following types of vessels are given in Table 3.9.1.

- Edible Liquid Carriers
- Chemical carriers

These requirements intend generally to verify the adequacy of the structural design of the tank, based on the loading conditions on which the scantlings of the tank structure were determined.

**Table 3.3.1 : General testing requirements**

| Item number | Structure to be tested                | Type of testing                   | Structural test pressure   | Remarks   |
|-------------|---------------------------------------|-----------------------------------|--|---|
| 1           | Double bottom tanks                   | Structural testing <sup>(a)</sup> | The greater of the following:-<br>- head of water up to the top of overflow.<br>- head of water up to the upper most continuous deck   | Tank boundaries tested from at least one side                           |
| 2           | Double side tanks                     | Structural testing <sup>(a)</sup> | The greater of the following:-<br>- head of water up to the top of over flow<br>- 1.0 (m) head of water above highest point of tank.   | Tank boundaries tested from at least one side                           |
| 3           | Tank bulkheads, deep tanks            | Structural testing <sup>(a)</sup> | The greater of the following:-<br>- head of water up to the top of overflow.<br>- 1.0 (m) head of water above highest point of tank<br>- setting pressure of the safety relief valves, where relevant. | Tank boundaries tested from at least one side                           |
|             | Fuel oil bunkers                      | Structural testing <sup>(a)</sup> |  |   |
| 4           | Fore peak and after peak used as tank | Structural testing                | The greater of the following:-<br>- head of water up to the top of overflow<br>- 1.0 (m) head of water above highest point of tank   | Test of the after peak carried out after the stern tube has been fitted |

|    |  |                                   |   |  |
|----|--|-----------------------------------|---|--|
|    | Fore peak not used as tank                         | Structural testing                | - head of water up to the uppermost continuous deck for cargo vessels and bulkhead deck for passengers              |  |
|    | After peak not used as tank                        | Leak testing                      |   |  |
| 5  | Water tight bulkheads                              | Hose testing <sup>(c)</sup>       |   | Through inspection of bulkhead to be carried out |
| 6  | Watertight doors below free board or bulkhead deck | Structural testing <sup>(e)</sup> | - water pressure head up to the uppermost continuous deck for cargo vessels and bulkhead deck for passenger vessels |  |
| 7  | Double plate rudders                               | Leak testing                      |   |  |
| 8  | Shaft tunnel clear of deep tanks                   | Hose testing                      |   |  |
| 9  | Shell doors  | Hose testing                      |   |  |
| 10 | Weather tight hatch covers and closing appliances  | Hose testing                      |   |  |
| 11 | Chain locker (if aft of collision bulkhead)        | Structural testing                | Head of water up to the top   |  |
| 12 | Independent tanks                                  | Structural testing                | Head of water up to the top of overflow, but not less than 0.9 (m)  |  |

| 13  | Ballast ducts | Structural testing | Ballast pump maximum pressure |  |
|---|---------------|--------------------|-------------------------------|--|
| <p>(a) Leak or hydro-pneumatic testing may be accepted under the conditions specified in 3.4, provided that at least one tank for each type is structurally tested. This however, does not apply to cargo space boundaries in tankers and tanks for segregated cargoes or pollutants. If the structural test reveals weakness or severe faults not detected by the leak test, all tanks are to be structurally tested.</p> <p>(b) Where applicable, the highest point of tank is to be measured to the deck and excluding hatches.</p> <p>(c) When hose test cannot be performed without damaging possible outfitting (machinery, cables, switchboards, insulation, etc.) already installed, it may be replaced, at the discretion of IRS by a careful visual inspection of all the crossings and welded joints; where necessary, dye penetration test or ultrasonic leak test may be required.</p> <p>(d) The test may be made before or after the door is fitted. In case test is done before, hose testing is to be carried out in place after the door is fitted.</p> |               |                    |                               |  |

| <b>Table 3.9.1 : Additional testing requirements for spaces within the cargo area of certain types of ships</b> |                         |                                |   |   |                |
|---|-------------------------|--------------------------------|---|---|----------------|
| <b>Item No.</b>   | <b>Types of vessels</b> | <b>Structures to be tested</b> | <b>Testing requirements</b>   | <b>Structural test pressure</b>   | <b>Remarks</b> |
| 1   | Edible liquid carriers  | Independent tanks              | Structural testing  | Head of water up to the top of over flow without being less than 0.9 (m)  |                |
| 2   | Chemical carriers       | Integral or independent tanks  | Structural testing of cargo tanks boundaries from at least one side | <p>The greater of the following:-</p> <ul style="list-style-type: none"> <li>- 1.0 (m) head of water above highest point of tank.</li> <li>- Setting pressure of the safety relief valves, where relevant.</li> </ul> |                |

**End of Chapter**



# **PART B**

# **STABILITY**

# **REQUIREMENTS**

**Intact and Damage Stability requirements and any other related rules for vessels operating in Inland Waters to be applicable as per IRS and / or any IACS Classification Society Rules and / or IWAI model rules as applicable may be accepted for Inland Vessels.**

**Intact Stability Requirements for Vessels operating in Inland Waters****Chapter 1****Rule 1****GENERAL**

- 1 The purpose of this Annexure on Intact Stability is to recommend stability criteria and other measures for ensuring the safe operation of all vessels to minimize the risk to such vessels, to the personnel on board and to the environment.
- 2 Application.
  - 2.1 This Code contains intact stability criteria for the following types of vessels.
    - Cargo vessels
    - Cargo vessels carrying timber deck cargo
    - Cargo vessels carrying grain in bulk
    - Passenger vessels
    - Pontoons
    - Cargo vessels carrying containers on deck and container vessels
  - 2.2 The requirements for vessels of novel design or vessels not otherwise covered shall be specially considered.
- 3 Definitions

For the purpose of this Annexure the definition given here under apply. For terms used, but not defined herein, the definitions as given Chap. 1 apply.

  - 3.1 An air-cushion vehicle is a craft such that the whole or a significant part of its weight can be supported, whether at rest or in motion, by a continuously generated cushion of air dependent for its effectiveness on the proximity of the surface over which the craft operates.
  - 3.2 A hydrofoil boat is a craft which is supported above the water surface in normal operating conditions by hydrodynamic forces generated on foils.
  - 3.3 A side wall craft is an air-cushion vehicle whose wall extending along the sides are permanently immersed hard structures.
  - 3.4 A container vessel means a vessel which is used primarily for the transport of marine containers.

**CHAPTER 2****Rule 1****Stability booklet**

1. Stability data and associated plans should be drawn up in the working language of the vessels and any other language the Administration may require. All translations of the stability booklet should be approved.
2. Each vessels should be provided with a stability booklet, approved by the Administration, which contains sufficient information to enable the master to operate the vessel in compliance with the applicable requirements contained in this Annexure. The Administration may have additional requirements. The stability booklet may include information on longitudinal strength, where required. The Annexure addresses only the stability – related contents of the booklet.
3. The format of the stability booklet and the information included will vary dependent on the vessel type and operation. In developing the stability booklet, consideration should be given to including the following information:-
  1. A general description of the vessel;
  2. Instructions on the use of the booklet;
  3. General arrangement plans showing water tight compartments, closures, vents, down flooding angles, permanent ballast, allowable deck loadings and free board diagrams;\
  4. Hydrostatic curves or tables and cross curves of stability calculated on a free-trimming basis, for the ranges of displacement and trim anticipated in normal operating conditions;
  5. Capacity plan or tables showing capacities and centers of gravity for each cargo stowage space;
  6. Tank sounding tables showing capacities, centers of gravity, and free surface data for each tank;
  7. Information on loading restrictions, such as maximum KG or minimum GM curve or table that can be used to determine compliance with the applicable stability criteria;
  8. Standard operating conditions and examples for developing other acceptable loading conditions using the information contained in the stability booklet;
  9. A brief description of the stability calculations done including assumptions;
  10. General precautions for preventing unintentional flooding;

11. Information concerning the use of any special cross-flooding fittings with descriptions of damage conditions which may require cross-flooding;
12. Any other necessary guidance for the safe operation of the vessel under normal and emergency conditions;
13. A table of contents and index for each booklet;
14. Inclining test report for the vessel, or:-
  1. Where the stability data is based on a sister vessel, the inclining test report of that sister vessel along with the light ship measurement report for the vessel in question; or
  2. Where light ship particulars are determined by other methods than from inclining of the vessel or its sister, a summary of the method used to determine those particulars;
15. Recommendation for determination of vessel's stability by means of an in-service inclining test.
16. If permanent ballast is used, its location and weight should be noted in the vessel's stability booklet, it should be located such that it does not shift during the normal operation of the vessel. Permanent ballast should not be removed from the vessel or relocated within the vessel without the approval of the Administration.
17. As an alternative to the stability booklet mentioned in 3.6.1, a simplified booklet in an approved form containing sufficient information to enable the master to operate the vessel in compliance with the applicable provisions of the Code as may be provided at the discretion of the Administration concerned.

## **Rule 2**

### **General precautions against capsizing**

1. Compliance with the stability criteria does not ensure immunity against capsizing, regardless of the circumstances, or absolve the master from his responsibilities. Masters should therefore exercise prudence and good seamanship having regard to the season of the year, weather forecasts and the navigational zone and should take the appropriate action as to speed and course warranted by the prevailing circumstances.

2. Care should be taken that the cargo allocated to the vessel is capable of being stowed so that compliance with the criteria can be achieved. If necessary, the amount should be limited to the extent that ballast weight may be required.
3. Before a voyage commences, care should be taken to ensure that the cargo, sizeable pieces of equipment have been properly stowed or lashed so as to minimize the possibility of both longitudinal and lateral shifting, while at sea, under the effect of acceleration caused by rolling and pitching.
4. A vessel, when engaged in towing operations, should possess an adequate reserve of stability to withstand the anticipated heeling moment arising from the two line without endangering the towing vessel. Deck cargo on board the towing vessel should be positioned as not to endanger the safe working of the crew on deck or impede the proper functioning of the towing equipment and be properly secured. Towline arrangements should include towing springs and a method of quick release of the tow.
5. The number of partially filled or slack tanks should be kept to a minimum because of their adverse effect on stability.
6. The stability criteria contained in chapter 3 set minimum values, but no maximum values are recommended. It is advisable to avoid excessive values of meta-centric height, since these might lead to acceleration forces which could be prejudicial to the vessel, its complement, its equipment and to safe carriage of the cargo. Slack tanks may, in exceptional cases, be used as a means of reducing excessive values of meta-centric height. In such cases, due consideration should be given to sloshing effects.
7. Regard should be paid to the possible adverse effects on stability where certain bulk cargoes are carried.

### **Rule 3**

#### **Operational precautions in heavy weather**

1. All doorways and other openings, through which water can enter into the hull or deck houses, forecastle, etc., should be suitably closed in adverse weather conditions and accordingly all appliances for this purpose should be maintained on board and in good condition.
2. Weather tight and water tight hatches, doors, etc., should be kept closed during navigation, except when necessarily opened for the working of the vessel and should

always be ready for immediate closure and be clearly marked to indicate that these fittings are to be kept closed except for access. Hatch covers and flush deck scuttles in fishing vessels should be kept properly secured when not in use during fishing operations. All portable dead lights should be maintained in good condition and securely closed in bad weather.

3. Any closing devices provided for vent pipes to fuel tanks should be secured in bad weather.
4. In all conditions of loading necessary care should be taken to maintain the minimum freeboard.

### **Chapter 3**

#### **General Intact Stability Criteria for All Vessels**

1. The following general criteria are recommended for passenger and cargo vessels.
  - The meta-centric height GM should not be less than 0.15 m, for all the vessels.
  - Passenger vessels, with 2/3 rd of passengers crowded on one side on the upper most deck, the angle of heel should not exceed 10° and the vessel should have a positive meta-centric height.

For the purpose of this Rule the weight of the passenger is to be taken as 65 kgs.

  - The freeboard in case of passenger vessels, should not be less than 760 mm in all conditions of loading.
  - The maximum angle of heel of all self-propelled vessels during tuning at service speed fully loaded on account of turning shall not exceed 10°.
2. Provisions should be made for a safe margin of stability at all stages of the voyage, regard being given to additions of weight, such as those due to absorption of water and to losses of weight such as those due to consumption of fuel and stores.
3. For vessels carrying oil-based pollutants in bulk, the Administration should be satisfied that the criteria given in 3.1 is maintained during all loading and ballasting operations.

### **Chapter 4**

#### **Severe wind and rolling criterion (weather criterion)**

1. This criterion supplements the stability criteria given in Chapter 3.
2. Weather criterion:-

a) The ability of a vessel to withstand the combined effects of beam wind and rolling should be demonstrated for each standard condition of loading, with reference to the figure as follows:-

1. The vessel is subjected to a steady wind pressure acting perpendicular to the vessel's centerline which results in a steady wind heeling lever ( $lw_1$ ).
2. From the resultant angle of equilibrium  $\theta_0$ , the vessel is assumed to roll owing to wave action to an angle of roll  $\theta_1$ , to windward. Attention should be paid to the effect of steady wind so that excessive resultant angles of heel are avoided;
3. The vessel is then subjected to a gush wind pressure which results in a gush wind heeling lever ( $lw_2$ );
4. Under these circumstances, area "b" should be equal to or greater than area "a";
5. Free surface effects should be accounted for in the standard conditions of loading

The angles in the above figure are defined as follows:-

$\theta_0$  = angle of heel under action of steady wind.

$\theta_1$  = angle of roll of windward due to wave action

$\theta_2$  = angle of down flooding ( $q_f$ ) or  $50^\circ$  or  $q_c$ , whichever is less,

Where:-

$\theta_f$  = angle of heel at which openings in the hull super structures or deck houses which cannot be closed weather tight immerse. In applying this criterion, small openings through which progressive flooding cannot take place need not be considered as open.

$\theta_c$  = angle of second intercept between wind heeling lever  $lw_2$  and GZ curves.

b) The wind heeling levers  $lw_1$  and  $lw_2$  referred above are constant values at all angles of inclination and should be calculated as follows:-

$lw_1 = (P \cdot A \cdot Z / 1000gD)(m)$  and

$lw_2 = 1.5 lw_1(m)$

Where:-

P = wind pressure of 504 Pa. The value of P used for vessels in restricted services may be reduced subjected to the approval of the administration;

A = Projected lateral area of the portion of the vessel and deck cargo above the water line ( $m^2$ )

Z = vertical distance from the center of A to the center of the underwater lateral area or approximately to a point at one half the mean draught (m);

D = displacement (t)

g = gravitational acceleration of 9.81 m/s<sup>2</sup>

c) The angle of roll (q<sub>1</sub>) referred to should be calculated as follows:-

$$q_1 = 109k.X_1.X_2(r.s)^{1/2} \text{ (degrees)}$$

Where:-

X<sub>1</sub> = factor as shown in table 1

X<sub>2</sub> = factor as shown in table 2

k = factor as follows:-

k = 1.0 for round-bilged vessel having no bilge or bar keels

k = 0.7 for a vessel having sharp bilges

k = as shown in table 3 for a vessel having bilge keels, a bar keel or both

$$r = 0.73 + 0.60 G/d$$

With:-

OG = distance between the center of gravity and the waterline (m) ( + if center of gravity is above the waterline, if it is below)

D = mean molded draught of the vessel (m)

S = factor as shown in table 4.

Table 1

Values of factor X<sub>1</sub>

| <b>B/d</b> | <b>X<sub>1</sub></b> |
|------------|----------------------|
| 2.4        | 1.00                 |
| 2.5        | 0.98                 |
| 2.6        | 0.96                 |
| 2.7        | 0.95                 |
| 2.8        | 0.93                 |
| 2.9        | 0.91                 |
| 3.0        | 0.90                 |
| 3.1        | 0.88                 |
| 3.2        | 0.86                 |
| 3.3        | 0.84                 |
| 3.4        | 0.82                 |
| 0.35       | 0.80                 |



Table 2

Values of factor X2

| <b>CB</b> | <b>X2</b> |
|-----------|-----------|
| <0.45     | 0.75      |
| 0.50      | 0.82      |
| 0.55      | 0.89      |
| 0.60      | 0.95      |
| 0.65      | 0.97      |
| >0.70     | 1.00      |

Table 3

Values of factor k

| <b>(Ak.100/LB)</b> | <b>K</b> |
|--------------------|----------|
| 0                  | 1.0      |
| 1.0                | 0.98     |
| 1.5                | 0.95     |
| 2.0                | 0.88     |
| 2.5                | 0.79     |
| 3.0                | 0.74     |
| 3.5                | 0.72     |
| 4.0                | 0.70     |

Table 4

Values of factor

| <b>T</b> | <b>S</b> |
|----------|----------|
| 6        | 0.100    |
| 7        | 0.098    |
| 8        | 0.093    |
| 12       | 0.065    |
| 14       | 0.053    |

|    |       |
|----|-------|
| 16 | 0.044 |
| 18 | 0.038 |
| 20 | 0.035 |

(Intermediate values in table 1-4 should be obtained by linear interpolation.)

Rolling period  $T = (2C B / (GM))^{1/2}$  (seconds)

Where:-

$C = 0.373 + 0.023 (B/d) - 0.043 (L/100)$ .

The symbols in the above table and formula for the rolling period are defined as follows:-

$L$  = length of the vessel at water line (m)

$B$  = molded breadth of the vessel (m)

$d$  = mean molded draught of the vessel (m)

$CB$  = block coefficient

$A_k$  = total over all area of bilge keels, or area of the lateral projection of the bar keel, or sum of these areas (m<sup>2</sup>)

$GM$  = meta centric height corrected for free surface effect (m).

## Rule 2

### Standard loading conditions to be examined

1. Loading conditions:- The standard loading conditions referred to in the text are as follows:-

#### **For a passenger vessel:-**

1. Vessel in the fully loaded departure condition with full stores and fuel and with the full number of passengers with their luggage;
2. Vessel in the fully loaded arrival condition, with full member of passengers and their luggage but with only 10% stores and fuel remaining;
3. Vessel without cargo, but with full stores and fuel and the full number of passengers and their luggage.
4. Vessel in the same condition as at .03 above with only 10% stores and fuel remaining.

**For a cargo vessel:-**

1. Vessel in the fully loaded departure condition, with cargo homogeneously distributed throughout all cargo spaces and with full stores and fuel;
2. Vessel in the fully loaded arrival condition, with cargo homogenously distributed throughout all cargo spaces and with 10% stores and fuel remaining;
3. Vessel in ballast in the departure condition, without cargo but with full stores and fuel;
4. Vessel in ballast in the arrival condition, without cargo and with 100% stores and fuel remaining.

**For a cargo vessel intended to carry deck cargoes:-**

1. Vessel in the fully loaded departure condition with cargo homogenously distributed in the holds and with cargo specified in extension and mass on deck, with full stores and fuel;
2. Vessel in the fully loaded arrival condition with cargo homogenously distributed in holds and with a cargo specified in extension and mass on deck, with 10% stores and fuel.
2. A mass of 65 kg should be assumed for each passenger except that this value may be reduced to not less than 60 kg where this can be justified. In addition, the mass and distribution of the luggage should be determined by the Administration.
3. The height of the center of gravity for passengers should be assumed equal to:-
  - 1.0 m above deck level for passengers standing upright. Account may be taken, if necessary, of camber and sheer of deck;
  - 0.30 m above the seat in respect of seated passengers.
4. Passengers and luggage should be considered to be in the spaces normally at their disposal.
5. Passengers without luggage should be considered as distributed to produce the most unfavorable combination of passengers heeling moment and / or initial meta-centric height, which may be obtained in practice, when assessing compliance with the criteria given in Chapter 3. In this connection, it is anticipated that a value higher than four persons per square-meter will not be necessary.

## Chapter 5

### Sub Division and Number of bulkheads

1. The requirements of the bulkheads are as follows:-
  - a) **Cargo Vessels:-** The number and location of bulkheads are to be as per Annexure 1.
  - b) **Passenger Vessels:-** The number of Bulkheads are to be as follows:-

| Length        | Machinery Aft | Machinery elsewhere |
|---------------|---------------|---------------------|
| $15 < L < 30$ | 3             | 3                   |
| $L > 30$      | 3             | 4                   |

Location of collision bulkhead is to be within the limits specified in Annexure 1

- c) **Pontoons:-** Minimum number of bulkheads is to be based on the damaged stability calculations to the satisfaction of the Administration.

### Determination of Lightship, Displacement and Center of Gravity and Guidance Information for conducting inclining Experiment

## Chapter 1

### Rule 1 Application

1. Every vessel, passenger or cargo should be inclined upon its completion and the elements of its stability determined.
2. Where any alterations are made to a vessel so as to materially affect the stability, the vessel should be re-inclined.
3. At periodic interval not exceeding five years, a lightweight surveys should be carried out on all passenger vessels to verify any changes in lightship displacement and longitudinal center of gravity. The vessel should be re-inclined whenever, in comparison with the approved stability information, a deviation from the lightship displacement exceeding 2% or a deviation of the longitudinal center of gravity exceeding 1% of L is found, or anticipated.

4. The Administration may allow the inclining test of an individual vessel to be dispensed with provided basic stability data available from them. Including test of a sister vessel and it is shown to the satisfaction of the Administration that reliable stability information for the exempted vessel can be obtained from such basic data.
5. The Administration may allow the inclining test of an individual vessel or class of vessels especially designed for the carriage of liquids or ore in bulk to be dispensed with when reference to existing data for similar vessels clearly indicates that due to the vessel's proportions and arrangements more than sufficient meta-centric height will be available in all possible loading conditions.

## **Chapter 2**

### **Definitions**

For the purpose of this Annexure, unless expressly provided otherwise:-

1. Certification of the test weights is the verification of the weight marked on a test weight. Test weight should be certified using a certified scale. The weight should be performed close enough in time to the inclining test to ensure the measured weight is accurate.
2. Draught is the vertical distance from the molded baseline to the waterline.
3. The inclining test involves moving a series of known weights, normally in the transverse direction, and then measuring the resulting change in the equilibrium heel angle of the vessel. By using this information and applying basic naval architecture principles, the vessel's vertical center of gravity (VCG) is determined.
4. Lightship condition is a vessel complete in all respects, but without consumables, stores, cargo, crew and effects, and without any liquids on board except that machinery and piping fluids, such as lubricants and hydraulics, are at operating levels.
5. A Lightweight survey involves taking an audit of all items which should be added, deducted or relocated on the vessel at the time of the inclining test so that the observed conditions of the vessel can be adjusted to the lightship condition. The weight, longitudinal, transverse and vertical location of each item should be accurately determined and recorded. Using this information, the static waterline of the vessel at the time of the inclining test as determined from measuring the free board or verified draught marks of the vessel, the vessels hydrostatic data, and the sea water density, the lightship displacement and longitudinal center of gravity (LCG) can be

obtained. The transverse center of gravity (TCG) may also be determined for vessels which are asymmetrical about the centerline or whose internal arrangement or outfitting is such that an inherent list may develop from off-center weight.

### **Chapter 3**

#### **Rule 1**

#### **Preparation for the Inclining Test**

##### **1. Notification of the Administration**

Written notification of the inclining test should be sent to the Administration as it requires or in due time before the test. An Administration representative should be present to witness the inclining test and the test results are submitted for review.

The responsibility for making preparations, conducting the inclining test and lightweight survey, recording the data, and calculating the results rests with the shipyard, owner or naval architect. While compliance with the procedures outlined herein will facilitate an expeditious and accurate inclining test, it is recognized that alternative procedures or arrangements may be equally efficient. However, to minimize the risk of delay, it is recommended that all such variances be submitted to the Administration for review prior to the inclining test.

##### **01 Details of notification**

Written notification, should provide the following information as the Administration may require:-

1. Identification of the vessel by name and shipyard hull number, if applicable;
2. Date, time and location of the test;
3. Inclining weight data:-
  1. Type;
  2. Amount (Number of units and weight of each);
  3. Certification;
  4. Method of handling (i.e. sliding rail or crane);
  5. Anticipated maximum angle of heel to each side;
4. Measuring devices:-
  1. Pendulums – approximate location and length;
  2. U-tubes – approximate location and distance between legs;
  3. Inclinometers – location and details of approvals and calibrations.
5. Approximate trim;

6. Condition of tanks;
7. Estimated weights to deduct, to complete, and to relocate in order to place the vessel in its true lightship condition;
8. Detailed description of any computer software to be used to aid in calculation during the inclining test;
9. Name and phone number of the person responsible for conducting the inclining test.

## **Rule 2**

### **General condition of the vessels**

1. A vessel should be as complete as possible at the time of the inclining test. The test should be scheduled to minimize the disruption in the vessel's delivery date or its operational commitments.
2. The amount and type of work left to be completed (weights to be added) affect the accuracy of the lightship characteristics, so good judgment should be used. If the weight or center of gravity of an item to be added cannot be determined with confidence, it is best to conduct the inclining test after the item is added.
3. Temporary material, tool boxes, staging, sand, debris etc. on board should be reduced to absolute minimum before the inclining test. Excess crew or personnel not directly involved in the inclining test should be removed from on board the vessel before the test.
4. Decks should be free of water. Water trapped on deck may shift and pocket in a fashion similar to liquids in a tank. Any rain, snow or ice accumulated on the vessel should be removed prior to the test.
5. The anticipated liquid loading for the test should be included in the planning for the test. Preferably, all tanks should be empty and clean, or completely full. The number of slack tanks should be kept to an absolute minimum. The viscosity of the fluid, the depth of the fluid and the shape-of the tank-should be such that the free surface effect can be accurately determined.
6. The vessel should be moored in a quiet, sheltered area free from extraneous forces such as propeller wash from passing vessels, or sudden discharges from shore side pumps. The tide conditions and the trim of the vessel during the test should be considered. Prior to the test, the depth of water should be measured and recorded in as many locations as are necessary to ensure that the vessel will not contact the bottom.

The specific gravity of water should be accurately recorded. The vessel should be moored in a manner to allow unrestricted heeling. The access ramps should be removed. Power lines, hoses, etc., connected to shore should be at a minimum, and kept slack at all times.

7. The vessel should be as upright as possible and have sufficient draught so that any abrupt changes in the water plane will be avoided as the vessel is inclined from side to side. A deviation from design trim of up to 10 of L is normally acceptable when using hydrostatic data calculated at design trim. Otherwise, the hydrostatic data should be calculated for the actual trim. Caution should be exercised when applying the "1% rule of thumb" to ensure that excessive error, as would result from a significant change – in the water plane area during heeling, is not introduced into the stability calculations. With inclining weights in the initial position, up to one-half degree of list is acceptable.
8. The total weight used should be sufficient to provide a minimum inclination of one degree and a maximum of four degrees of heel to each side. The Administration may, however, accept a smaller inclination angle for large vessels. Test weights should be compact and of such a configuration that the vertical center of gravity of the weights can be accurately determined. Each weight should be marked with an identification number and its weight. Re-certification of the test weights should be carried out prior to the inclining. A crane of sufficient capacity and reach, or some other means, should be available during the inclining test to shift weight on the deck-in an expeditious and safe manner, water ballast transfer may be carried out, when it is impractical, to incline using solid weights, if acceptable to the Administrator.
9. Two pendulums (minimum) should be used to allow identification of bad readings at any one pendulum station. They should each be located in an area protected from the wind. The pendulums should be long enough to give a measured deflection, to each side of upright, of at least 5 cm. To ensure recordings from individual instruments are kept separate, it is suggested that the pendulums be physically located as far apart as practical. One or more pendulums may be substituted by other measuring devices (U-tubes or inclinometers) at the discretion of the Administration.
10. Efficient two-way communications should, be provided between central control and the weight handlers and between center control and each pendulum station. One person at a central control station should have complete control over all personnel involved in the test.



**Rule 3****Plans required**

1. The person in charge of the inclining test should have available a copy of the following plans at the time of the inclining test:-
  1. Lines plan
  2. Hydrostatic curves or hydrostatic data;
  3. General arrangement plan of decks, holds, inner bottoms, etc.;
  4. Capacity plan showing capacities and vertical and longitudinal centers of gravity of cargo spaces tanks, etc. When ballast water is used as inclining weights, the transverse and vertical centers of gravity for the applicable tanks, for each angle of inclination, must be available;
  5. Tank sounding tables;
  6. Draught mark locations; and
  7. Docking drawing with keel profile and draught mark corrections (if available)

**Rule 4****Test procedure**

1. Procedures followed in conducting the inclining test and light weight survey should be in accordance with the recommendations laid out in Chapter.
  1. Free board / draught readings should be taken to establish the position of the waterline in order to determine the displacement of the vessel at the time of the inclining test. It is recommended that at least five freeboard readings, approximately equally spaced, be taken on each side of the vessel or that all draught marks (forward, mid-ship and aft) be read on each side of the vessel.
  2. The standard test employs eight distinct weight movements. Movement No. 8, a recheck of the zero point, may be omitted if a straight line plot is achieved after Movement No. 7. If a straight line plot is achieved after the initial zero and six weight movements, movements, the inclining test is complete and the second check at zero may be omitted. If a straight line plot is not achieved, those weight movements that did not yield acceptable plotted points should be repeated or explained.

2. A copy of the inclining data should be forwarded to the Administration along with the calculated results of the inclining test in an acceptable report format, if required.
3. All calculations performed during the inclining test and in preparation of an inclining test report may be carried out by a suitable computer program. Output generated by such a program may be used for presentation of all or partial data and calculations included in the test report if it is clear, concise, well documented, and generally consistent in form and content with Administration requirements.

### **Rule 5**

#### **Stability test for pontoons**

1. An inclining experiment is not normally required for a pontoon, provided a conservative value of the lightship vertical center of gravity (KG) is assumed for the stability calculations. The KG can be assumed at the level of the main deck although it is recognized that a lesser value could be acceptable if fully documented. The lightship displacement and longitudinal center of gravity should be determined by calculation based on draught and density readings.

### **Chapter 4**

#### **DETAILED GUIDELINES FOR CONDUCT OF INCLINING TEST**

### **Rule 1**

#### **INTRODUCTION**

This Chapter contains important detailed procedures for conducting an inclining test in order to ensure that valid results are obtained with maximum precision at a minimal cost to owners, shipyards and the Administrator. A complete understanding of the correct procedures used to perform an inclining test is imperative in order to ensure that the test is conducted properly and so that results can be examined for accuracy as the inclining experiment is conducted.

#### **1. Free surface and tank age**

1. If there are liquids on board the vessel when it is inclined, whether in the bilges or in the tanks, they will shift to the low side when the vessel heels. This shift of liquids will exaggerate the heel of the vessel. Unless the exact weight and distance of liquid shifted can be precisely calculated, the meta-centric height (GM) calculated from the inclining test will be in error. Free surface should be minimized by emptying the tanks

completely and making sure all bilges are dry; or by completely filling the tanks so that no shift of liquid is possible. The latter method is not the optimum because air pockets are difficult to remove from between structural members of a tank, and the weight and center of the liquid in a full tank should be accurately determined in order to adjust the lightship values accordingly. When tanks must be left slack, it is desirable that the sides of the tanks be parallel vertical planes and the tanks be regular in shape, (i.e. rectangular, trapezoidal, etc.) when viewed from above, so that the free surface moment of the liquid can be accurately determined.

Free surface correction is independent of the height of the tank in the vessel, location of the tank, and direction of heel. As the width of the tank increases, the value of free surface moment increases by the third power. The distance available for the liquid to shift is the predominant factor. This is why even the smallest amount of liquid in the bottom of a wide tank or bilge is normally unacceptable and should be removed prior to the inclining experiment. Insignificant amounts of liquids in V-shaped tanks or voids (e. g. a chain locker in the bow), where the potential shift is negligible, may remain if removal of liquid would be difficult or would cause extensive delays.

When ballast water is used as inclining weight, the actual transverse and vertical movements of the liquid should be calculated taking into account the change of heel of the vessel. Free surface corrections as defined in this paragraph should not apply to the inclining tanks.

2. Pressed up tanks – "Pressed up" means completely full with no voids caused by trim or inadequate venting. Anything less than 100% full, for example the 98% condition regarded as full for operational purposes, is not acceptable. Preferably, the vessel should be roiled from side to side to eliminate entrapped air before taking the final sounding. Special care should be taken when pressing fuel oil tanks to prevent accidental pollution.
3. Empty tanks – It is generally not sufficient to simply pump tanks until suction is lost. Enter the tank after pumping to determine if final stripping with portable pumps or by hand is necessary.

The exceptions are very narrow tanks or tanks where there is a sharp dead rise, since free surface would be negligible. Since all empty tanks should be inspected, all manholes should be open and the tanks well ventilated and certified as safe for entry. A safe testing device should be on hand to test for sufficient oxygen and minimum

toxic levels. A certified marine chemist's certificate certifying that all fuel oil and chemical tanks are safe for human entry should be available, if necessary.

## **2. Mooring arrangements**

The importance of good mooring arrangements cannot be over-emphasized. The arrangement selections will be dependent upon many factors. Among the most important are depth of water, wind and current effects. Whenever possible, the vessel should be moored in a quiet, sheltered area free from extraneous forces such as propeller wash from passing vessels or sudden discharges from shore side pumps. The depth of water under the hull should be sufficient to ensure that the hull will be entirely free of the bottom. The tide conditions and the trim of vessel during the test should be considered. Prior to the test, the depth of water should be measured and recorded-in as many locations to ensure the vessel will not contact the bottom. If marginal, the test should be conducted during high tide or the vessel moved to deeper water.

1. The mooring arrangement should ensure that the vessel will be free to list without restraint for a sufficient period of time to allow a satisfactory reading of the heeling angle, due to each weight shift, to be recorded.
2. The vessel should be held by lines at the bow and the stem, attached to bollards and / or cleats on the deck. If suitable restraint of the vessel cannot be achieved using deck fittings, then temporary pad eyes should be attached as close as possible to the center line of the vessel-and as near the waterline as practical. Where the vessel can be moored to one side only, it is good practice to supplement the bow and stern line with two sprint lines in order to maintain positive control of the vessel. The leads of the spring lines should be as long as practicable. Cylindrical camels should be provided between the vessel and the dock. All lines should be slack, with the vessel free of the pier and camels, when taking readings.
  1. If the vessel is held off the pier by the combined effect of the wind and current, a superimposed heeling moment will act on the vessel through the test. For steady conditions this will not affect the results. Gusty wind or uniformly varying wind and / or current will cause these superimposed heeling moments to change, which may require additional test points to obtain a valid test. The need for additional test points can be determined by plotting test points as they are obtained.
  2. If the vessel is pressed against the fenders by wind and / or current, all lines should be slack. The cylindrical camels will prevent binding but there will be an

additional super imposed heeling moment due to the vessel bearing against the camels. This condition should be avoided where possible but, when used, consideration should be given to pulling the vessel free of the dock and camels and letting the vessel drift as readings are taken.

3. Another acceptable arrangement is where the combined wind and current are such that the vessel may be controlled by only one line at either the bow or the stern. In this case, the control line should be led from on or near the center line of the vessel with all lines but the control line slack, the vessel is free to veer with the wind and / or current as readings are taken. This can sometimes be troublesome because varying wind and / or current can cause distortion of the plot.

3. The mooring arrangement should be submitted to the approval authority for review prior to the test.

4. If a floating crane is used for handling inclining weights, it should not be moored to the vessel.

**3. Test weights:-**

1. Weights, such as porous concrete, that can absorb significant amounts of moisture, should only be used if they are weighed just prior to the inclining test or if recent weight certificates are presented. Each weight should be marked with an identification number and its weight. For small vessels, drums completely filled with water may be used. Drums should normally be full and capped to allow accurate weight control. In such cases, the weight of the drums should be verified in the presence of the Administration representatives using a recently calibrated scale.

2. Precaution should be taken to ensure that the decks are not overloaded during weight movements. If deck strength is questionable then a structural analysis should be performed to determine if existing framing can support the weight.

3. Generally the test weights should be positioned as far outboard as possible on the upper deck. The test weights should be on board and in place prior to the scheduled time of the inclining test.

**4. Pendulums**

1. The pendulum should be long enough to give a measured deflection, to each side of upright, of at least 5 centimeters. Generally, this will require a pendulum length of at least 3 meters. It is recommended that pendulum lengths of 4-6 meters be used. Usually, the longer the pendulum the greater the accuracy of the test; however, if excessively long pendulums are used on a tender vessel the pendulums may not settle

down and the accuracy of the pendulums would then be questionable. On large vessels with high GM, pendulums lengths in excess of the length recommended above may be required to obtain the minimum deflection. In such cases should be filled with high viscosity oil. If the pendulums are of different lengths, possibility of collusion between station recorders is avoided.

2. On smaller vessels, where there is insufficient headroom to hang long pendulums, the 5 centimeter deflection should be obtained by increasing the test weight so as to increase the heel. On most vessels the typical inclination is between one and four degrees.
3. The pendulum wire should be piano wire or other monofilament material. The top connection of the pendulum should afford unrestricted rotation of the pivot point. An example is that of a washer with the pendulum wire attached suspended from a nail.
4. A bough filled with a liquid should be provided to dampen oscillations of the pendulum after each weight movement. It should be deep enough to prevent the pendulum weight from touching the bottom. The use of a winged plumb bob at the end of the pendulum wire can also help to dampen the pendulum oscillations in the liquid.
5. The battens should be smooth, light-colored wood, 1 to 2 centimeters thick, and should be securely, fixed in position so that an inadvertent contact will not cause them to shift. The batten should be aligned close to the pendulum wire but not in contact with it.
6. The pendulums may be placed in any location on the vessel, longitudinally and transversely. The pendulums should be in place prior to the scheduled time of the inclining test.
7. It is recommended that inclinometers or other measuring devices only be used in conjunction with at least one pendulum. The Administration may approve an alternative arrangement when this is found impractical.

## **Rule 2**

### **EQUIPMENT REQUIRED**

Besides the physical equipment necessary such as the inclining weights, pendulums, small boat, etc., the following are necessary and should be provided by or made available to the person in charge of the inclining:-

1. Engineering scales for measuring pendulum deflections (rules should be subdivided sufficiently to achieve the desired accuracy);
2. Sharp pencils for marking pendulum deflections;
3. Chalk for marking the various positions of the inclining weights;
4. A sufficiently long measuring tape for measuring the movement of the weight and locating different items onboard;
5. A sufficiently long sounding tape for sounding tanks and taking free board readings;
6. One or more well maintained specific gravity hydrometers with range sufficient to cover 0.999 to 1.030, to measure the specific gravity of the water in which the vessel is floating (a hydrometer for measuring specific gravity of less than 1.000 may be needed in some locations);
7. Other hydrometers as necessary to measure the specific gravity of any liquid on board;
8. Graph paper to plot inclining movements versus tangents;
9. A straight edge to draw the measured waterline on the lines drawing;
10. A pad of paper to record data;
11. An explosion proof testing device to check for sufficient oxygen and absence of lethal gases in tanks and other closed spaces such as voids and coffer dams;
12. A thermometer; and
13. Draught tubes (if necessary).

### **Rule 3**

#### **TEST PROCEDURE**

1. The inclining experiment, the free board / draught readings and the survey may be conducted in any order and still achieve the same results. If the person conducting the inclining test is confident that the survey will show that the vessel is in an acceptable condition and there is the possibility of the weather becoming unfavorable, then it is suggested that the inclining be performed first and the survey last. If the person conducting the test is doubtful that the vessel is complete enough for the test, it is recommended that the survey be performed first since this could invalidate the entire test, regardless of the weather conditions. It is very important that all weights, the number of people on board, etc., remain constant throughout the test.

## 2. Initial walk through and survey

The person responsible for conducting the inclining test should arrive on board the vessel well in advance of the scheduled time of the test to ensure that the vessel is properly prepared for the test. If the vessel to be inclined is large, a preliminary walk through may need to be done the day preceding the actual incline. To ensure the safety of personnel conducting the walk through, and to improve the documentation of surveyed weights and deficiencies, at least two persons, should make the initial walk through. Things to check include: all compartments are open, dean, and dry, tanks are well ventilated and gas free, movable or suspended items are secured and their position documented, pendulums are in place, weights are on board and in place, a crane or other method for moving weights is available, and the necessary plans and equipment are available. Before beginning the inclining test, the person conducting the test should:-

1. Consider the weather conditions. The combined adverse effect of wind and current may result in difficulties or even an invalid test due to the following:-
  1. Inability to accurately record free boards and draughts.
  2. Excessive or irregular oscillations of the pendulums.
  3. Variation in unavoidable superimposed heeling moments.

In some instances, unless conditions can be sufficiently improved by moving the vessel to a better location, it may be necessary to delay or postpone the test. Any significant quantities of rain water should be removed from the vessel before the test.

2. Make a quick overall survey of the vessel to make sure the vessel is complete enough to conduct the test and to ensure that all equipment is in place. An estimate of items which will be outstanding at the time of the inclining test should be included as part of any test procedure submitted to the Administration. This is required so that the Administration representative can be advised the shipyard / naval architect if in their opinion the vessel will not be sufficiently complete to conduct the incline and that it should be rescheduled. If the condition of the vessel is not accurately depicted in the test procedure and at the time of the inclining test the Administration representative considers that the vessel is in such condition that an accurate incline cannot be conducted, the representative may refuse to accept the incline and require that the incline be conducted at a later date;
3. Enter all empty tanks after it is determined that they are well ventilated and gas free to ensure that they are dry and free of debris. Ensure that any pressed up tanks are



indeed full and free of air pockets. The anticipated liquid loading for the incline should be included in the procedure required to be submitted to the Administration;

4. Survey the entire vessel to identify all items which need to be added to the vessel, removed from the vessel, or relocated on the vessel to bring the vessel to the lightship condition. Each item should be clearly identified by weight and vertical and longitudinal location. If necessary, the transverse location should also be recorded. The inclining weights, the pendulums, any temporary equipment, dunnage and the people on board during the inclining test are all among the weights to be removed to obtain the lightship condition. The person calculating the lightship characteristics from the data gathered during the incline and survey and / or the person reviewing the inclining test may not have been present during the test and should be able to determine the exact location of the items from the data recorded and the vessel's drawings. Any tanks containing liquids should be accurately sounded and the soundings recorded;

4.1 It is recognized that the weight of some items on board, or that are to be added, may have to be estimated. If this is necessary, it is in the best interest of safety to be on the safe side when estimating, so the following rules of thumbs should be followed:-

- i. When estimating weights to be added:-
  - Estimate high for items to be added high in the vessel.
  - Estimate low for items to be added low on the vessel.
- ii. When estimating weights to be removed:-
  - Estimate low for items to be removed from high in the vessel.
  - Estimate high for items to be removed from low in the vessel.
- iii. When estimating weights to be relocated:-
  - Estimate high for items to be relocated to a higher point in the vessel.
  - Estimate low for items to be relocated to a lower point in the vessel.

### **3. Free board / draught readings**

1. Free board / draught readings should be taken to establish the position of the waterline in order to determine the displacement of the vessel at the time of the inclining test. It is recommended that at least five freeboard readings, approximately equally spaced, be taken on each side of the vessel or that all draught marks (forward, mid-ship, and aft) be read on each side of the vessel. Draught mark readings should be taken to assist in determining the waterline defined by freeboard readings, or to verify the

vertical location of draught marks on vessels where their location has not been confirmed. The locations for each freeboard readings should be clearly marked. The longitudinal location along the vessel should be accurately determined and recorded since the (molded) depth at each point will be obtained from the vessel's lines. All freeboard measurements should include a reference note clarifying the inclusion of the coating in the measurement and the coaming height.

2. Draught and freeboard readings should be read immediately before or immediately after the inclining test. Weights should be on board and in place and all personnel who will be on board during the test including those who will be stationed to read the pendulums, should be on board and in location during these readings. This is particularly important on small vessels. If readings are made after the test, the vessel should be maintained in the same condition as during the test. For small vessels, it may be necessary to counterbalance the list and trim effects of the freeboard measuring party. When possible, readings should be taken from a small boat.
3. A small boat should be available to aid in the taking of freeboard and draught mark readings. It should have low freeboard to permit accurate observation of the readings.
4. The specific gravity of the floating water should be determined at this time. Samples should be taken from a sufficient depth of the water to ensure a true representation of the floating water and not merely surface water, which would contain fresh water from runoff of rain. A hydrometer should be placed in a water sample and the specific gravity read and recorded.
5. A draught mark reading may be substituted for a given freeboard reading at that longitudinal location if the height and location of the mark has been verified to be accurate by a keel survey while the vessel was in dry dock.
6. The dimensions given on a vessel's lines drawing are normally molded dimensions. In the case of depth, the means the distance from the inside of the bottom shell to the inside of the deck plate. In order to plot the vessel's waterline on the lines drawing, the freeboard readings should be converted to molded draughts. Similarly, the draught mark readings should be corrected from extreme (bottom of keel) to molded (top of keel) before plotting. Any discrepancy between the free board / draught readings should be resolved.
7. The mean draught (average of port and starboard reading) should be calculated for each of the locations where freeboard / draught readings are taken and plotted on the vessel's lines drawing or Outboard profile to ensure that all readings are consistent

and together define the correct waterline. The resulting plot should yield either a straight line or a waterline which is either hogged or sagged. If inconsistent readings are obtained, the freeboard / draughts should be retaken.

#### **4. The incline**

1. Prior to any weight movements the following should be checked:-
  1. The mooring arrangement should be checked to ensure that the vessel is floating freely. (This should be done just prior to each reading of the pendulums).
  2. The pendulums should be measured and their lengths recorded. The pendulums should be aligned so that when the vessel heels, the wire will be close enough to the batten to ensure an accurate reading but will not come into contact with the batten.
  3. The initial position of the weights is marked on the deck. This can be done by tracing the outline of the weights on the deck.
  4. The communications arrangement is adequate.
  5. All personnel are in place.
2. A plot should be run during the test to ensure that acceptable data is being obtained. Typically, the abscissa of the plot will be heeling moment (weight times distance) and the ordinate will be the tangent of the heel angle (deflection of the pendulum divided by the length of the pendulum). This plotted line does not necessarily pass through the origin of any other particular point for no single point is more significant than any other point. A linear regression analysis is often used to fit the straight line. The weight movements give a good spread of points on the test plot.
3. Plotting all of the readings for each of the pendulums during the inclining experiment aids in the discovery of bad readings. Since  $(W)(x)/\tan q$  should be constant, the plotted line should be straight. Deviations from a straight line are an indication that there were other moments acting on the vessel during the inclining. These other moments should be identified, the cause corrected, and the weight movements repeated until a straight line is achieved. – Figures A – D illustrate examples of how to detect some of these other moments during the inclining, and a recommended solution for each case. For simplicity, only the average of the readings is shown on the inclining plots.
4. Once everything and everyone is in place, the zero position should be obtained and the remainder of the experiment conducted as quickly as possible, while maintaining accuracy and proper procedures, in order to minimize the possibility of a change in environmental conditions during the test.

5. Prior to each pendulum reading, each pendulum station should report to the control station when the pendulum has stopped swinging. Then, the control station will give a "standby" warning and then a "mark" command. When "mark" is given, the batten at each position should be marked at the location of the pendulum wire. If the wire was oscillating slightly, the center of the oscillations should be taken as the mark. If any of the pendulum readers does not think the reading was good one, the reader should advice the control station and the point should be retaken for all pendulum stations. Likewise, if the control station suspects the accuracy of a reading, it should be repeated for all the pendulum stations. Next to the mark on the batten should be written the number of weight movement, such as zero for the initial-position and one through seven for the weight movements.
6. Each weight movement should be made in the same direction, normally transversely, so as not to change the trim of the vessel. After each weight movement, the distance the weight was moved (center W center) should be measured and the heeling moment calculated by multiplying the distance by the amount of weight, moved. The tangent is calculated for each pendulum by dividing the deflection by the length of the pendulum. The resultant tangents are plotted on the graph. Provided there is good agreement among the pendulums with regard to the  $\tan \phi$  value, the average of the pendulum readings may be graphed instead of plotting each of the readings.
7. Inclining data sheets should be used so that no data is forgotten and so that the data is clear, concise, and consistent in form and format. Prior to departing the vessel, the person conducting the test and the Administration representative should initial each data sheet as an indicating of their concurrence with the recorded data.

**End of Chapter**

# **PART C**

## **MAIN AND**

## **AUXILLIARY**

## **MACHINERY**

## **REQUIREMENTS**

**Main and Auxiliary Machinery requirements and any other related rules for vessels operating in Inland Waters to be applicable as per IRS and / or any IACS Classification Society Rules and / or IWAI model rules as applicable may be accepted for Inland Vessels**

## Chapter 1

### General Requirements for the Design and Construction of Machinery

| <i>Section</i> | <i>Contents</i>   |
|----------------|---|
| 1              | <i>General</i>  |
| 2              | <i>Machinery Room Arrangements</i>  |
| 3              | <i>Trials</i>   |
| 4              | <i>Certification of Machinery and Components based upon Quality Management System</i> |

## Section 1

### General

#### 1.1 Scope

The requirement of this Chapter and those given in Ch. 2 to 10 apply to the construction and installation of main propulsion and auxiliary machinery systems, together with their associated equipment, boilers, pressure vessels and pumping and piping arrangements fitted in vessels intended to be classed with IRS.

#### 1.2 Machinery to be constructed under survey

- 1.2.1 In vessels intended to be built under Special Survey, all important units of equipment are to be surveyed at the manufacturer's works. The workmanship is to be to the Surveyor's satisfaction and the Surveyor is to be satisfied that the components are suitable for the intended purpose and duty. Examples of such units are:-

Main propulsion engines, including their associated gearing, flexible couplings, scavenge blowers and superchargers;

Boilers supplying system for propulsion or for services essential for the safety or the operation of the vessel in the waterway including super heaters, economizers, de-super heaters, steam receivers. All other boilers having working pressures exceeding 3.5 bar, and having heating surfaces greater than 4.65 (m<sup>2</sup>);

- Auxiliary engines of 110 (kW) (150 shp) and over which are the source of power for services essential for safety or for the operation of the vessel.
- Steering machinery;
- Athwart ship thrust, units, their prime movers and control mechanisms;
- All pumps necessary for the safety of vessel, e.g. bilge, ballast, fire pumps, etc.;

- Air compressors, air receivers and other pressure vessels necessary for the operation of main propulsion and essential machinery.
- Alarm and control equipment as detailed in Ch. 7; and
- Electrical equipment and electrical propelling machinery as detailed in Ch. 8.

### **1.3 Extent of Survey**

- 1.3.1 The Surveyors are to examine and test the materials and workmanship from the commencement of work until the final test of the machinery under full power working conditions. Any defects, etc., are to be indicated as early as possible. On completion, the Surveyors will submit a report and, if this is found to be satisfactory by IRS, a certificate of class will be granted and an appropriate notation assigned in accordance with Pt. 1

### **1.4 Departures from the rule**

- 1.4.1 Where it is proposed to depart from the requirements of the Rules. Classification society will be prepared to give due consideration to the circumstances of any special case.

### **1.5 Plans and particulars**

- 1.5.1 Before the work is commenced, plans in triplicate of all machinery items, as detailed in the Ch. 2 to 9 giving the requirements for individual systems, are to be submitted for approval. The particulars of the machinery, including power ratings and design calculations, where applicable necessary to verify the design, are also to be submitted. Any subsequent, modifications are subject to approval before being put in to operations.
- 1.5.2 The strength requirements for rotating parts of the machinery, as specified in Ch. 4 to 8, are based upon strength consideration only and their application does not relieve the manufacturer from the responsibility for the presence of dangerous vibrations in the installation at speeds within the operating range.

### **1.6 Availability of machinery for operation**

- 1.6.1 The design and arrangement it to be such that the machinery can be started and controlled on board vessel without external aid, so that operating conditions can be maintained under all circumstances.

### **1.7 Ambient reference conditions**

- 1.7.1 The rating of the main and auxiliary machinery is to be suitable for the temperature conditions associated with the geographical limits of the restricted device.

1.7.2 Machinery installations are to be designed such as to ensure proper operations under the conditions as under:-

- Permanent list of 10°
- Permanent trim of 5°

### **1.8 Power ratings**

1.8.1 In the following Chapters, where the dimensions of any particular component are determined from shaft power, P in (kW) (H, in shp). and revolutions per minute, R. the values to be used are to be derived from the following:-

- For main propelling machinery, the maximum shaft power and corresponding revolutions per minute giving the maximum torque for which the machinery is to be classed; and
- For auxiliary machinery, the maximum continuous shaft power and corresponding revolutions per minute which will be used in service.

### **1.9 Units**

1.9.1 Units and formulae included in the Rules are shown in SI units followed by metric units in brackets where appropriate.

1.9.2 Where the metric version of shaft power, i. e. (shp), appears in the Rules, 1 shp is equivalent to 75 (kgf meter/sec) or 0.735 (kW).

1.9.3 Pressure gauges may be calibrated in bar. Where  
 $1 \text{ bar} = 0.1 \text{ (N/mm}^2\text{)} = 1.02 \text{ (kgf/cm}^2\text{)}$

### **1.10 Power conditions for generator sets**

1.10.1 Auxiliary engines coupled to electrical generators are to be capable under service conditions of developing continuously the power to drive the generators at full rated output and, if developing for a short period (15 minutes) an overload power of not less than 10 percent.

1.10.2 Engine builders are to satisfy the Surveyors by tests on individual engines that the above requirements, as applicable, can be complied with, due account being taken of the difference between the temperature under test conditions and those specified in 1.7.1. Alternatively, where it is not practicable to test the engine / generator set as unit, type tests (e.g. against a brake) representing a particular size and range of engines may be accepted. With oil engines any fuel stop fitted is to be set to permit the short period overload power of not less than 10 percent above full, rated output being developed.

### **1.11 Fuel**



1.11.1 The flash point (closed cup test) of oil fuel is to be not less than 55° C, unless specially approved.

1.11.2 Fuels with flash points lower than 55°C, but not less than 43°C, unless specially approved, may be used in vessels, intended for service restricted to certain geographical limits, where it can be ensured that the temperature of the machinery spaces will always be 10°C below the flash point of the fuel. In such cases, safety precautions and the arrangements for storage and pumping will be specially considered.

### **1.12 Astern power**

1.12.1 Sufficient astern power is to be provided to maintain control of the vessel in all normal circumstances.

## **Section 2**

### **Machinery Room Arrangements**

#### **2.1 General**

2.1.1. The machinery is to be so designed installed and protected that risks of fire, explosions, accidental pollution, leakages and accidents thereof, and accidents to personnel working in machinery spaces will be minimized.

2.1.2 The design and arrangement of machinery foundations, shaft connections, piping and ducting is to take into account the effects of thermal expansion, vibrations, misalignment and hull interaction to ensure operation within safe limits. Bolts and nuts exposed to dynamic forces and vibrations are to be properly secured.

#### **2.2 Accessibility**

2.2.1 Accessibility for attendance and maintenance purposes, it to be provided for machinery plants.

#### **2.3 Fire protection**

2.3.1 All surfaces of machinery where the surface temperature may exceed 220° C and where impingement of flammable liquids may occur are to be effectively shielded to prevent ignition. Where insulation covering these surfaces is oil absorbing or may permit penetration of oil, the insulation is to be encased in steel or equivalent.

2.3.2 Flammable or oil absorbing materials are not to be used in floors, gratings, etc. in boiler and engine rooms, shaft tunnels or in compartments where settling tanks are installed.

**2.4 Ventilation**

- 2.4.1 All spaces, including engine and cargo pump spaces, where flammable or toxic gases or vapors may accumulate, are to be provided with adequate ventilation under all conditions.

**2.5 Communications**

- 2.5.1 At least one independent means of communication is to be provided between the bridge and engine room control station.

**Section 3****Trials****3.1 General**

- 3.1.1 Tests of components and trials of machinery, as detailed in the Chapters giving the requirements for individual systems are to be carried out to the satisfaction of the Surveyors.

**3.2 Trials**

- 3.2.1 For all types of installations, the trials are to be of sufficient duration, and carried out under normal maneuvering conditions, to prove the, machinery under power. The trials are also to demonstrate that any vibration which may occur within the operating speed range is acceptable.
- 3.2.2 The trials are to include demonstrations of the following:-
- The adequacy of the starting arrangements to provide the required number of starts of the main engines.
  - The ability of the machinery to reverse the direction of thrust of the propeller in sufficient time, under normal maneuvering conditions, and so bring the-vessel to rest from maximum ahead rated speeds.
- 3.2.3 Where controllable pitch propellers are fitted, the free route astern trial is to be carried out with the propeller blades set in full pitch astern position. Where emergency manual pitch setting facilities are provided, their operation is to be demonstrated to the satisfaction of the Surveyors.
- 3.2.4 All trials are to be to Surveyor's satisfaction.

## **Section 4**

### **Certification of Machinery and Components based upon Quality Management Systems**

#### **4.1 General**

- 4.1.1 This certification scheme is applicable to works where the employment of quality control procedures is well established. Classification society will have to be satisfied that the practices employed will ensure that the quality of finished products is to the standards which would be demanded when using traditional survey procedures.
- 4.1.2 Classification society will consider proposed designs for compliance with the Rules, or other appropriate requirements, and the extent to which the manufacturing processes, and control procedures ensure conformity of the product to the design. A comprehensive survey will be made by the Surveyors of the actual operation of the quality control programme and of the adequate and competence of the staff to implement.
- 4.1.3 Where classification society considers that the requirements of 4.1.2 can be satisfactorily compiled with, the manufacturers will, in general, be approved and authorized to inspect and certify their products.
- 4.1.4 The procedures and practices of manufacture which have been granted approval will be kept under continuous review.
- 4.1.5 Approval by another organization will not normally be acceptable as sufficient evidence that a manufacturer's arrangements comply with class requirements.

#### **4.2 Requirements for approval**

- 4.2.1 The manufacturer is required to have adequate equipment and facilities for those operations appropriate to the level of design, development and manufacture being undertaken.
- 4.2.2 The manufacturer shall demonstrate that the firm has experience consistent with technology and complexity of the product for which approval is sought and that firm's products have been of a consistently high standard.
- 4.2.3 The manufacturer should have implemented quality management systems generally in accordance with the ISO 9000 series of standards.
- 4.2.4 The manufacturer shall establish and maintain procedures and controls to ensure that class requirements for certification of materials and components at sub-contractor's works are complied with.

**4.3 Information required for approval**

4.3.1 Manufacturers applying for approval under this scheme are to submit the following information:-

- Description of the products for which certification is required including, where applicable, model or type number;
- Applicable plans and details of materials used;
- An outline description of all important manufacturing plant and equipment;
- A summary of equipment used for measuring and testing during manufacturing and completion;
- The quality manual;
- The system used for identification and traceability;
- Number and qualification of personnel engaged in quality control and quality assurance and
- A list of suppliers of materials and components and proposed arrangements to ensure compliance with the requirements for certification.

**4.4 Approval and maintenance of approval**

4.4.1 After receipt and appraisal of the information required by 4.3, an assessment of the works would be carried out by the Surveyors to ensure compliance with the quality manual.

4.4.2 If the Initial assessment of works confirms that the implementation of the quality management systems is satisfactory, department will issue to the manufacturer a Quality Assurance Approval Certificate which will include details of the products for which approval, has been given.

4.4.3 An extension of approval in respect of product type may be given at the discretion of chief surveyor without any additional assessment.

4.4.4 The certificate will be valid for 3 years subject to surveillance assessment being carried out every 6 months.

4.4.5 When significant faults or deficiencies are found during surveillance assessments or surveillance assessments are not carried out, the certificate of approval may be withdrawn / suspended at the discretion of the chief surveyor.

**End of Chapter**

**Chapter 2**  
**Piping Design Requirements**  
**Contents**

Section

- 1 General
- 2 Carbon and Low Alloy Steel Pipes and Fittings
- 3 Copper and Copper Alloy Pipes and Fittings
- 4 Cast Iron Pipes and Fittings
- 5 Plastic pipes
- 6 Flexible Hoses
- 7 Hydraulic Tests on Pipes and Fittings

**Section 1**  
**General**

**1.1 Scope**

- 1.1.1 The requirements of this Chapter apply to the design and construction of piping systems, including pipe fittings forming parts of such systems but excluding steam piping systems and systems where the temperature exceeds 300° C.
- 1.1.2 For steam piping systems and systems having temperatures greater than 300° C, the rules and rules for Construction & Classification of Steel Vessels will be applicable.

**1.1 Classes of pipes**

- 1.2.1 For the purpose of testing, type of joints to be adopted heat treatment and welding procedure, piping systems are divided into three classes, as given in Table 1.2.1.
- 1.2.2 For Class I piping, the *Rules and Rules for the Construction & Classification of Steel Vessels* will be applicable,
- 1.2.3 In addition to the pressure piping systems in Table 1.2.1. Class III pipes may be used for open ended piping, e.g. overflows, vents, boiler waste steam pipes, open ended drains etc.

**1.3 Design pressure**

- 1.3.1 The design pressure, P, is the minimum permissible working pressure and is to be not less than the highest set pressure of the safety valve or relief valve.

- 1.3.2 The design pressure of feed piping and other piping on the discharge from pumps is to be taken as the pump pressure at full rated speed against a shut valve. Where a safety valve or other protective device is fitted to restrict the pressure to a lower value than the shut valve load, the design pressure is to be the highest set pressure of the protective design.

**Table 1.2.1 : Classes of piping systems**

| Piping system | Class I               | Class II               | Class III              |
|---------------|-----------------------|------------------------|------------------------|
| Fuel oil      | $P > 16$ or $T > 150$ | $P < 16$ and $T < 150$ | $P < 7$ and $T < 60$   |
| Other media   | $P > 49$ or $T > 300$ | $P < 40$ and $T < 300$ | $P < 16$ and $T < 200$ |

#### 1.4 Design temperature

- 1.4.1 The design temperature is to be taken as the maximum temperature of the internal fluid, but no case is it to be less than 50° C.

#### 1.5 Design symbols

- 1.5.1 The symbols used in this Chapter are defined as follows: a = Percentage negative manufacturing tolerance on thickness; b = Bending allowance (mm);  
c = corrosion allowance (mm);  
D = outside diameter of pipe (mm) (see 1.5.2);  
d = inside diameter of pipe (mm) (see 1.5.3);  
e = weld efficiency factor (see 1.5.4);  
P = design pressure, in (N/mm<sup>2</sup>);  
P<sub>t</sub> = hydraulic test pressure, in (N/mm<sup>2</sup>);  
R = radius of curvature of a pipe bend at the center line of the pipe (mm);  
T = design temperature, in C°;  
t = the minimum thickness of a straight pipe (mm) including corrosion allowance and negative tolerance, where applicable;  
t<sub>b</sub> = the minimum thickness of a straight pipe to be used for a pipe bend (mm) including bending allowance, corrosion allowance and negative tolerance, where applicable;  
σ = maximum permissible design stress, in (N/mm<sup>2</sup>).

- 1.5.2 The outside diameter, D is subject to manufacturing tolerance, but these are not to be used in the evaluation of formulae.
- 1.5.3 The inside diameter d, is not to be confused with normal size, which is an accepted designation associated with outside diameters of a standard rolling sizes.
- 1.5.4 The weld efficiency factor e, is to be taken as 1.0 for seamless and electric resistance and induction welded steel pipes. Where other methods of pipe manufacture are proposed, the value of e will be specially considered.

## 1.6 Heat treatment

- 1.6.1 Method of heat treatment and means of temperature control and recording are to be to the satisfaction of Surveyors.

## Section 2

### Carbon and Low Alloy Steel Pipes and Fittings

## 2.1 Materials

- 2.1.1 Materials for Class I and Class II piping systems, also for vessel-side valves and fittings and valves on the collision bulkhead, are to be manufactured and tested in accordance with the appropriate requirements of Ch. 8. Pt 2. *Inspection and Testing of Materials of Rules & Rules for the Construction and Classification of Steel Vessels.*
- 2.1.2 Materials for Class III piping systems may be manufactured and tested in accordance with the requirements of acceptable national international specifications. Pipes having forge welded longitudinal seams are not to be used for oil fuel systems, for heating coils in oil tanks, or for pressure exceeding 0.4 (N/mm<sup>2</sup>). The manufacturer's test certificate will be acceptable and is to be provided for each consignment of materials.

## 2.2 Minimum thickness of steel pipes and bends

- 2.2.1 The maximum permissible design stress,  $\sigma$  is to be taken as the lowest of the following values:-

$$\sigma \leq \frac{E_t}{1.6} \text{ or } \frac{R_{20}}{2.7} \text{ or } \sigma = \frac{S_R}{1.6}$$

Where

$E_t$  = specified minimum lower yield or 0.2 percent proof stress at the design temperature.

$R_{20}$  = specified minimum tensile strength at ambient temperature.

$S_R$  = average stress to produce rupture in 100.000 hours at the design temperature.

| <b>2.2.1 : Carbon and carbon-manganese steel pipes : Maximum permissible stress (N/mm<sup>2</sup>)</b> |  |     |     |     |     |
|--|--|-----|-----|-----|-----|
| <b>Design temp. °C</b>   | <b>Specified minimum tensile strength (N/mm<sup>2</sup>)</b> |     |     |     |     |
|  | 320  | 360 | 410 | 460 | 490 |
| 50   | 107  | 120 | 136 | 151 | 160 |
| 100  | 105  | 117 | 131 | 146 | 156 |
| 150  | 99   | 110 | 124 | 139 | 148 |
| 200  | 92   | 103 | 117 | 132 | 141 |
| 250  | 78   | 91  | 106 | 122 | 131 |
| 300  | 62   | 76  | 93  | 111 | 121 |

2.2.2 The maximum thickness, t, of straight steel pipes is to be determined by following formula:-

$$t = \left( \frac{P}{2\sigma e + P} + C \right) \frac{1}{1 - \alpha} (m)$$

where,

P, D, e and are defined in Sec. 1, Cl. 1.5.1

$\sigma$  is defined in 2.2.1 and also obtained from Tables 2.2.1

c is obtained from Table 2.2.2.

| <b>Table 2.2.2 : Values of c for steel pipes</b>   |                              |
|--|------------------------------|
| <b>Piping service</b>  | <b>C (mm)<br/>(See Note)</b> |
| Compressed air systems   | 1.0                          |
| Hydraulic / Lubricating oil systems  | 0.3                          |
| Fuel oil systems   | 1.0                          |
| Cargo oil systems  | 2.0                          |
| Refrigerating plants   | 0.3                          |
| Fresh water systems  | 0.8                          |
| Note:-<br>For pipes passing through tanks an additional corrosion allowance is to be considered according to the figures given in Table and depending upon the external medium in order to account for the external corrosion. |                              |



- 2.2.3 The minimum thickness,  $t_o$ , of a straight steel pipe to be used for a pipe bend is to be determined by the following formula, except where it can be demonstrated that the use of a thickness less than  $t_b$  would not reduce the thickness below 't' at any point after bending:-

$$t_b = \left( \frac{P}{2\sigma e + P} + b + c \right) \frac{1}{1 - \alpha} (m)$$

where,

P, D, R, e, b and a are defined in Sec. 1, Ch. 1.5.1;

$\sigma$  and c are defined in table 2.2.1 and 2.2.2 respectively;

$$b = \frac{D}{2.5R} \left( \frac{P}{2\sigma e + P} \right) (m)$$

In general R not to be less than 3D

- 2.2.4 The minimum thickness calculated in accordance with 2.2.2 and 2.2.3 is not to be less than that given in Table 2.2.4. Where the pipes are efficiently protected against corrosion, the thickness may be reduced by not more than 1.0 (mm). For threaded pipes, where permitted, the thickness is to be measured at the bottom of the threads.

**Table 2.2.4 : Minimum pipe thickness, t (mm) (see note)**

| <b>External diameter D (mm)</b> | <b>Pipes in general</b> | <b>Venting overflow &amp; sounding pipes for structural tanks</b> |
|---------------------------------|-------------------------|---|
| 10.2-12                         | 1.6                     | -   |
| 13.5-19.3                       | 1.8                     | -   |
| 20                              | 2                       |   |
| 21.3 - 25                       | 2                       | -   |
| 26.9 – 33.7                     | 2                       | -   |
| 38 – 44.5                       | 2                       | 4.5   |
| 48.3                            | 2.3                     | 4.5   |
| 51 – 63.                        | 2.3                     | 4.5   |
| 70                              | 2.6                     | 4.5   |
| 76.1 – 82.5                     | 2.6                     | 4.5   |
| 88.9 – 108                      | 2.9                     | 4.5   |
| 114.3 – 125                     | 3.2                     | 4.5   |
| 133 – 139.7                     | 3.6                     | 4.5   |

|               |     |     |
|---------------|-----|-----|
| 152.4 – 168.3 | 4   | 4.5 |
| 177.8         | 4.5 | 5   |
| 193.7         | 4.5 | 5.4 |
| 219.1         | 4.5 | 5.9 |
| 244.5 – 273   | 5   | 6.3 |
| 298.5 – 368   | 5.6 | 6.3 |
| 406.4 – 457.2 | 6.3 | 6.3 |

### 2.3 Flange connections

- 2.3.1 Flanges with their pressure-temperature ratings in accordance with recognized national / international standards will normally be accepted.
- 2.3.2 Flanges may be cut from plates or may be forged or cast. The material is to be suitable for the design temperature. Flanges may be attached to the branches by screwing and expanding or by welding. Alternative methods of flange attachment may be accepted provided details are submitted for consideration.
- 2.3.3 Examples of accepted flange connections and their uses are given in Fig. 2.3.1 and Table 2.3.1 respectively.

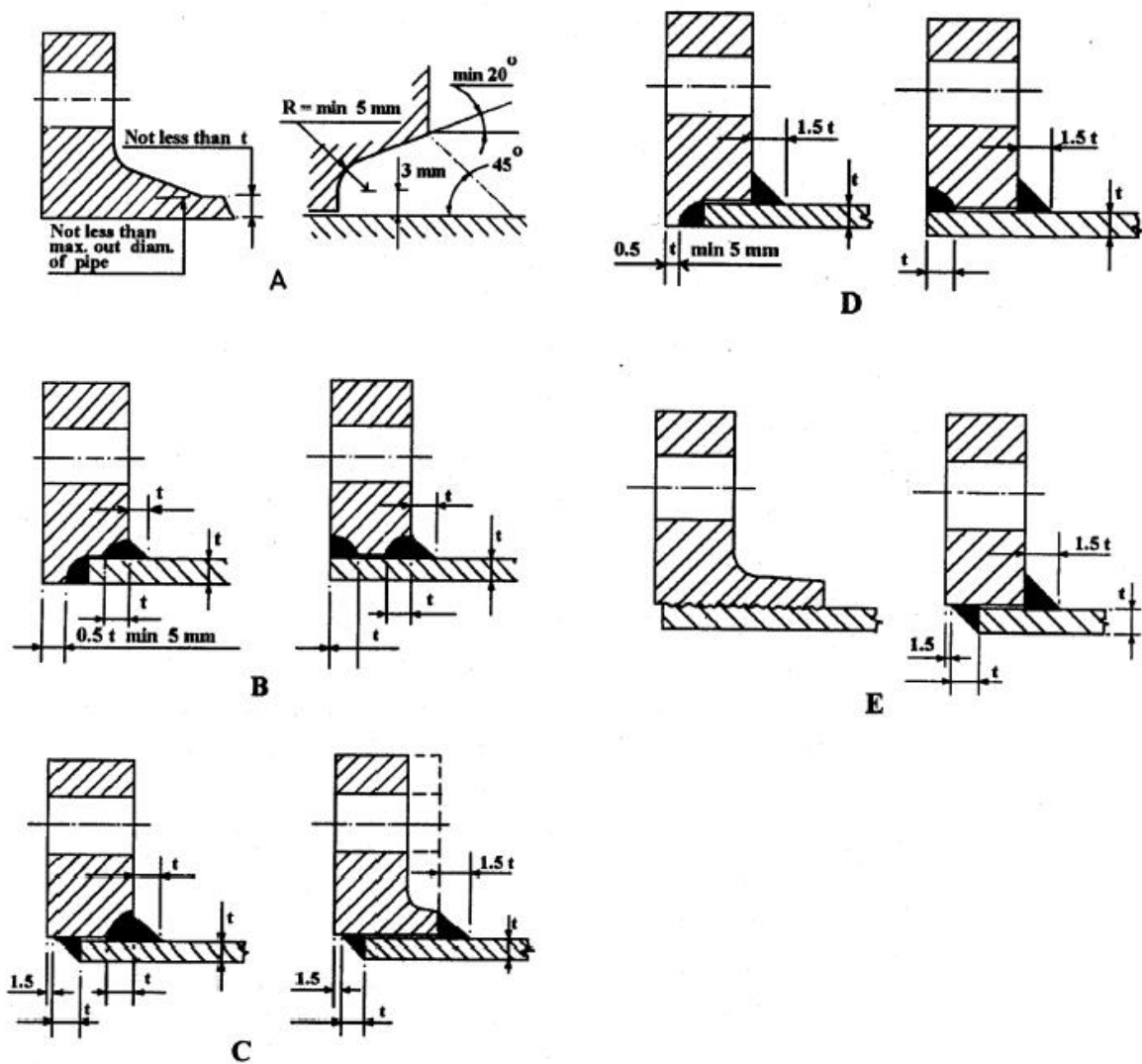


Fig. 2.3.1

Figure

| Table 2.3.1 : Type of flange connections |                            |             |                            |
|--|----------------------------|-------------|----------------------------|
| Class of piping                          | Lub. and fuel oil          | Other media |                            |
|  | Typical flange application | t° C        | Typical flange application |
| II                                       | A-B-C                      | > 250 250   | ABC<br>A-B-C-D-E           |
| III                                      | A-B-C-E                    |             | A-B-C-D-E                  |

- 2.3.4 Where flanges are secured by screwing, as indicated in Fig. 2.3.1 the pipes and flange are to be screwed with a vanishing thread and the diameter of the screwed position of pipe over the thread is not to be appreciably less than the outside diameters of the unscrewed pipe. After the flange has been screwed hard home, the pipe is to be expanded into the flange. The vanishing thread on a pipe is to be not less than three pitches in length, and the diameter at the root of the thread is to increase uniformly from the standard rood diameter to the diameter at the top of the thread. This may be produced by suitably grinding the dies, and the flange should be tapered out to the same formation.

## 2.4 Threaded sleeve joins

- 2.4.1 Threaded sleeve joints, in accordance with national or other established standards, may be used with carbon steel pipes within the limits given in Table 2.4.1 and for services other than pipe systems conveying combustible fluids.

| <b>Table 2.4.1 : Limiting design conditions for threaded sleeve joints</b> |  |                               |
|--|--|-------------------------------|
| <b>Normal bore (mm)</b>  | <b>Maximum pressure<br/>(N/mm<sup>2</sup>)</b> | <b>Maximum temperature °C</b> |
| = < 25   | 1.2  | 260                           |
| > 25 =< 40   | 1.0  | 260                           |
| > 40 =< 80   | 0.85   | 260                           |
| > 80 =< 100  | 0.7  | 260                           |

## 2.5 Non-destructive examination of welded pipes

- 2.5.1 In addition to visual examination of pipe welds by the Surveyors, non-destructive examination of butt and fillet welds is to be carried out in accordance with 2.5.2 to 2.5.4 to the satisfaction of the Surveyors.
- 2.5.2 Selected butt welds of pipes of outside diameter of 101.6 (mm) and over in Class I piping systems are to be radio graphed at Surveyor's discretion. Use of ultrasonic examination in lieu of radiography will be specially considered.
- 2.5.3 Selected fillet welds in pipes of 101.6 (mm) outside diameter and over in Class II piping systems are to be examined by magnetic particle or liquid penetrate flaw testing at Surveyor's discretion.
- 2.5.4 Defects in welds are to be rectified and re-examined by the appropriate test method, all to the satisfaction of the Surveyors.

**2.6 Post-weld heat treatment**

- 2.6.1 Carbon and carbon-manganese steel pipes and fabricated branch pipes, manufactured from material having a carbon content not exceeding 0.25 percent and having a thickness exceeding 30 (mm), are to be given a stress relieving heat treatment on completion of welding. All pipes and branches having carbon content in excess of 0.25 percent are to be given a stress relieving heat treatment. Where oxy-acetylene welding has been employed, however, all the pipes and branch pieces are to be normalized on completion of welding.

**Section 3****Copper and Copper Alloys Pipes and Fittings****3.1 Materials**

- 3.1.1 Materials for Class II piping systems and shipside valves and fittings and valves on the collision bulkhead are to be manufactured and tested in accordance with the requirements of Ch. 8. Pt. 2, Inspection and Testing of Materials of Rules & Rules for the Construction and Classification of Steel Vessels.
- 3.1.2 Materials for Class III piping systems are to be manufactured and tested in accordance with the requirements of acceptable national / international specifications. The manufacturer's test certificate will be acceptable and is to be provided for each consignment of material.
- 3.1.3 Pipes are to be seamless and branches are to be provided by cast or stamped fittings, pipe pressings or other approved fabrications.
- 3.1.4 Brazing and welding materials are to be suitable for the operating temperature and for the medium being carried. All brazing and welding are to be carried out to the satisfaction of the Surveyors.
- 3.1.5 In general, the maximum permissible service temperature of copper and copper alloy pipes, valves and fittings is not to exceed 200°C for copper and aluminum brass, and 300°C for copper nickel. Cast bronze valves and fittings complying with the requirements of Ch.8, Pt. 2, Inspection and Testing of Materials, of Rules & Rules for the Construction and Classification of Steel Vessels may be accepted up to 260° C.

**3.2 Minimum thickness of pipes**

- 3.2.1 The minimum thickness,  $t$ , of straight copper and copper alloy pipes is to be determined by the following formula:-

$$t = \left( \frac{P}{2 \sigma_e + P} + C \right) \frac{1}{1 - \alpha} (m \quad )$$

Where, P, D and a are as defined in Sec. 1, Cl. 1.5.1

$\sigma$  = maximum permissible design stress, in (N/mm<sup>2</sup>) from Table 3.2.1; Intermediate values of stresses may be obtained by linear interpolation;

c = corrosion allowance;

= 0.8 (mm) for copper, aluminum brass and copper-nickel alloys where the nickel content is less than 10 percent;

= 0.5 (mm) for copper-nickel alloys where the nickel content is 10 percent or greater.

= 0 where the media are not-corrosive relative to the pipe material.

Table 3.2.1 : Copper and Copper Alloy Pipes

| Pipe material              | Condition of supply | Specified min. tensile strength (N/mm <sup>2</sup> ) | Permissible stress (N/mm <sup>2</sup> ) |      |      |      |      |      |
|----------------------------|---------------------|--|---|------|------|------|------|------|
|                            |                     |  | Maximum design temperature °C           |      |      |      |      |      |
|                            |                     |  | 50                                      | 75   | 100  | 125  | 150  | 175  |
| Copper                     | Annealed            | 220  | 41.2                                    | 41.2 | 40.2 | 40.2 | 34.3 | 27.5 |
| Aluminum brass             | Annealed            | 320  | 78.5                                    | 78.5 | 78.5 | 78.5 | 78.5 | 51.0 |
| 90 / 10 copper nickel iron | Annealed            | 270  | 68.6                                    | 68.6 | 67.7 | 65.7 | 63.7 | 61.8 |
| 70 / 30 copper nickel      | Annealed            | 360  | 81.4                                    | 79.4 | 77.5 | 75.5 | 73.5 | 71.6 |
|                            |                     |  | Maximum design temperature °C           |      |      |      |      |      |
|                            |                     |  | 200                                     | 225  | 250  | 275  | 300  |      |
| Copper                     | Annealed            | 220  | 18.6                                    | -    | -    | -    | -    |      |
| Aluminum brass             | Annealed            | 320  | 24.5                                    | -    | -    | -    | -    |      |
| 90 / 10 copper nickel iron | Annealed            | 270  | 58.8                                    | 55.9 | 52.0 | 48.1 | 44.1 |      |
| 70 / 30 copper nickel      | Annealed            | 360  | 69.6                                    | 67.7 | 65.7 | 63.7 | 61.8 |      |

- 3.2.2 The minimum thickness,  $t_b$ , of a straight seamless copper or copper alloy pipe to be used for a pipe bend is to be determined by the formula below, except where it can be demonstrated that the use of a thickness less than  $t_b$  would not reduce the thickness below 't' at any point after bending:-

$$t_b = \left( \frac{P}{2 \sigma_e + P} + b + c \right) \frac{1}{1 - \alpha} (m)$$

Where P, D, b and c are defined in sec. 1 Cl. 1.5.1, and e and c are defined in 3.2.1

$$b = \frac{D}{2.5 R} \left( \frac{P}{2 \sigma_e + P} \right) (m)$$

In general, R is to be not less than 3D.

| <b>Table 3.2.2 : Limiting design conditions for threaded sleeve joints</b> |  |                     |
|--|--|---------------------|
| <b>Standard pipe sizes (outside diameter) (mm)</b>                         | <b>Minimum overriding nominal thickness (mm)</b> |                     |
|  | <b>Copper</b>                                    | <b>Copper alloy</b> |
| 8 to 10  | 1.0  | 0.8                 |
| 12 to 20   | 1.2  | 1.0                 |
| 25 to 44.5   | 1.5  | 1.2                 |
| 50 to 76.1   | 2.0  | 1.5                 |
| 88.9 to 108  | 2.5  | 2.0                 |
| 133 to 159   | 3.0  | 2.5                 |
| 193.7 to 267   | 3.5  | 3.0                 |
| 273 to 457.2   | 4.0  | 3.5                 |
| 508  | 4.5  | 4.0                 |

- 3.2.3 Where the minimum thickness calculated by 3.2.1 or 3.2.2 is less than shown in Table 3.2.2 the minimum nominal thickness for the appropriate standard pipe size shown in the Table is to be used. No allowance is required for negative tolerance or reduction in thickness due to bending on this nominal thickness. For threaded pipes, where permitted, the minimum thickness is to be measured at the bottom of the thread.

### **3.3 Heat treatment**

- 3.3.1 Pipes which have been hardened by cold bending are to be suitably heat treated on completion of fabrication and prior to being tested by hydraulic pressure. Copper pipes are to be annealed and copper alloy pipes are to be either annealed or stress relief heat treated.

## **Section 4**

### **Cast Iron Pipes and Fittings**

#### **4.1 Spheroidal or nodular graphite cast iron**

- 4.1.1 Spheroidal or nodular graphite iron castings for pipes, valves and fittings in Class II and III piping systems are to be made in a grade having a specified minimum elongation not less than 12 percent on gauge length of  $\sqrt{S_o}$ , where  $S_o$  is the actual cross-sectional area of the test piece.
- 4.1.2 Castings for Class II and III systems, also for shipside valves and fittings and valves on collision bulkhead, are to be manufactured and tested in accordance with the requirements of acceptable national specifications. A manufacturer's test certificate will be accepted and is to be provided for each consignment of material.
- 4.1.3 Where the elongation is less than the minimum required by 4.1.1 the material is, in general, to be subject to the same limitations as grey cast iron.

#### **4.2 Grey cast iron**

- 4.2.1 Grey cast iron pipes, valves and fittings will, in general, be accepted in Class III piping systems except as stated in 4.2.2.
- 4.2.2 Grey cast iron is not to be used for following:-
- a) Pipes for steam systems and fire extinguishing systems;
  - b) Pipes, valves and fittings for boiler blow down systems and other piping systems subject to shock or vibration;
  - c) Shipline valves and fittings;
  - d) Valves fitted on collision bulkhead;
  - e) Clean ballast lines through cargo oil tanks to forward ballast tanks;
  - f) Bilge lines in tanks;
  - g) Outlet valves of fuel tanks with static head.
- 4.2.3 Grey iron castings for piping systems are to comply with acceptable national / international specifications.



## **Section 5**

### **Plastic Pipes**

#### **5.1 General**

- 5.1.1 Proposals to use plastics material in shipboard piping systems will be considered in relation to the properties of the materials, the operating conditions of temperature and pressure, and the intended service. Any proposed service for plastic pipes not mentioned in these rules is to be submitted for special consideration.
- 5.1.2 The specification of the plastic material including mechanical and thermal properties and chemical resistance data, is to be submitted for consideration.
- 5.1.3 These requirements are applicable to thermo-plastic pipes but, where appropriate, may also be applied to pipes manufactured in fiber-reinforced thermosetting resins.
- 5.1.4 Plastic pipes are not to be used where they will be subject to temperatures above 60°C or below 0°C. Special consideration will be given to particular material in appropriate applications at higher temperatures.

#### **5.2 Applications**

- 5.2.1 Plastics pipes of approved type may be used for the following services:-
- a) Air and sounding pipes to tanks used exclusively for carrying water ballast or fresh water, with the exception of the portion above deck;
  - b) Sounding pipes to cargo holds;
  - c) Water ballast and fresh water pipes situated inside tanks used exclusively for carrying water ballast or fresh water; and
  - d) Scupper pipes draining inboard provided they are not led within the boundaries of refrigerated chambers. The first two items (a and b) are not applicable to passenger vessels.
- 5.2.2 Plastics pipes may be used for domestic and similar services for which there are no rule requirements, such as the following:-
- a) Domestic cold sea and fresh water systems;
  - b) Sanitary systems;
  - c) Sanitary and domestic waste pipes wholly, situated above the free board deck; and
  - d) Water pipes associated with air conditioning plants.
- Notwithstanding the foregoing, plastic pipes are not to be used in sea water systems where leakage or failure of the pipes could give rise to the danger of flooding.

5.2.3 Since plastic materials are generally heat sensitive and very susceptible to fire damage, plastic pipes will not be acceptable for service essential to safety, such as the following:-

- a) Fire extinguishing pipes;
- b) Bilge pipes in cargo holds;
- c) Bilge and ballast pipes in the machinery space;
- d) Main and auxiliary water circulating pipes;
- e) Feed and condensate pipes; and
- f) Pipes carrying – oil or other flammable liquids,

### **5.3 Intactness of bulkhead and decks**

5.3.1 Where plastic pipes are arranged to pass through watertight or fire resisting bulkheads or decks, provision is to be made for maintaining the integrity of the bulkhead or deck in the event of pipe failure. Details of the arrangements are to be submitted for approval.

### **5.4 Design and construction**

5.4.1 Pipes and fittings are to be of robust construction and are to comply with the requirements of such national / international standards as may be consistent with their intended use. Particulars of scantlings and joints are to be submitted for consideration.

5.4.2 All – pipes are to be adequately but freely supported. Suitable provision for expansion and contraction to be made in each range of pipes to allow for large movements between plastic pipe and steel structure, the coefficient of thermal expansion for plastics being eight or more times that of steel.

5.4.3 All fittings and branches are to be suitable for the intended service and are to have joints of cemented, flanged or other approved types.

5.4.4 The strength of the pipes and fittings and the acceptability of any jointing system employed is to be checked tested at the Surveyor's discretion. The strength of pipes, fittings, joints between pipes and joints between pipes and fittings, as appropriate, is to be determined by hydraulic pressure tests to destruction of sample assemblies. The pressure is to be so applied that failure of the test sample assembly occurs in not less than 5 minutes. Deformation of the pipes and fittings during test is acceptable.

## **Section 6**

### **Flexible Hoses**

#### **6.1 General**

- 6.1.1 Short joining lengths of flexible hoses of approved type may be used, where necessary to accommodate relative movement between various items of machinery connected to permanent piping systems.
- 6.1.2 For the purpose of approval for the applications in 6.2, details of the materials and construction of the hoses, and the method of attaching the end fittings, are to be submitted for consideration.
- 6.1.3 In general, the use of hose clips as a means of securing the ends of hoses is to be restricted to the engine cooling water system, where the hose consists of a short straight length joining two metal pipes, between two fixed points on the engine.
- 6.1.4 Prototype pressure tests are to be carried out on each type of hose, complete with end fittings and in no case is the bursting pressure to be less than five times the maximum working pressure in service.
- 6.1.5 Attention is to be given to any statutory requirements of the National Authority of the country in which the vessel is to be registered. Such requirements may include a fire test for hoses that are intended to be used in systems conveying flammable fluids or sea water.

#### **6.2 Applications**

- 6.2.1 Synthetic rubber hoses, with integral cotton or similar braid reinforcement, may be used in fresh and sea water cooling systems. In the case of sea water systems, where failure of the hoses could give rise to the danger of flooding, the hoses are to be suitably enclosed.
- 6.2.2 Synthetic rubber hoses, with single or double-closely woven integral wire braid reinforcement or convoluted metal pipes with wire braid protection, may be used in bilge, ballast, compressed air, fresh water, sea water, fuel oil and lubricating oil systems. Where synthetic rubber hoses are used for fuel oil supplied to burners, the hoses are to have external wire braid protection in addition to the integral wire braid.

## **Section 7**

### **Hydraulic Tests on Pipes and Fittings**

#### **7.1 Hydraulic tests before installation onboard**

- 7.1.1 All Class II pipes and their associated fittings are to be tested by hydraulic pressure to the Surveyor satisfaction. Further, all steam feed, compressed air and fuel oil pipes, together with their fittings, are to be similarly tested where the design pressure is greater than 0.35 (N/mm<sup>2</sup>). The test is to be carried out after completion of manufacture and before installation on board and where applicable before insulating and coating.
- 7.1.2 The test pressure is to be 1.5 time design pressure.
- 7.1.3 All valve bodies are to be tested by hydraulic pressure to 1.5 times the nominal pressure rating at ambient temperature. However the test pressure need not be more than 7 (N/mm<sup>2</sup>) above the design pressure specified for the design temperature.

#### **7.2 Testing after assembly onboard**

- 7.2.1 Heating coils in tanks and fuel oil piping are to be tested by hydraulic pressure, after installation on board, to 1.5 times the design pressure but in no case to less than 0.35 (N/mm<sup>2</sup>).
- 7.2.2 Where bilge pipes are accepted in way of double bottom tanks or deep tanks, the pipes after fitting are to be tested by hydraulic pressure to the same pressure as the tanks through which they pass.

**End of Chapter**

**Chapter 3**  
**Pumping and piping**  
**Contents**

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**Section 1**

**General**

**1.1 Scope**

- 1.1.1 The requirements of this chapter are applicable to all vessels except where otherwise stated.
- 1.1.2 Piping systems layouts for which no requirements are given herein. Will be specially considered.

**1.2 Plans**

- 1.2.1 The following plans in diagrammatic form are to be submitted for consideration before proceeding with the work.
  - a) General arrangement of pumps and piping systems;
  - b) Fuel oil filling, transfer and service piping systems;
  - c) Bilge and ballast piping systems;
  - e) Liquid cargo pumping systems;
  - f) Hydraulic power piping systems for essential services;
  - g) Compressed air piping systems;
  - h) Steering gear piping systems;
  - i) Sea water and fresh water service piping systems;
  - j) Air and sounding piping systems;

- k) Steam and feed water piping systems
- l) Sanitary piping systems;
- m) Fire main and fire extinguishing piping

1.2.2 The plans are to include the information like, wall thickness, maximum working pressure temperature and material of all pipes and type, size and material of the valve fittings.

### **1.3 Materials**

1.3.1 The materials to be used in piping systems are to be suitable for the service intended. In general, except, where otherwise stated, pipes, valves and fittings are to be made of steel, cast iron, copper, alloy or other approved material.

1.3.2 Cast iron is not to be used for:-

- a) Shipside and collision bulkhead fittings;
- b) Outlet valves of fuel tanks with static head;
- c) Bilge and ballast lines passing through double bottom tanks, pipe tunnel and cargo oil tanks;
- d) Any piping which can be subjected to shock such as water hammer.

1.3.3 Materials sensitive to heat such as aluminum, lead or plastics, are not to be used in systems essential to the safe operation of the vessel.

### **1.4 Design Pressure**

1.4.1 The design pressure is considered to be, the most severe condition of co-incident pressure and temperature excepted in normal operation. For this purpose the maximum difference in pressure between inside and outside of the part is to be considered.

### **1.5 Design temperature**

1.5.1 Unless otherwise specified the temperature used in design is to be not less than the mean metal temperature (through the thickness) accepted under operating conditions for the part considered.

1.5.2 When sudden cyclic changes in temperature are apt to occur in normal operation with only minor pressure fluctuations, the design is to be governed by the highest probable operating temperature and corresponding pressure.

### **1.6 Redundancy**

1.6.1 Redundancy is the ability of a system or a component thereof to maintain or restore its function when one failure has occurred. This can be achieved for instance by installation of more units or alternative means for performing the function.

**1.7 Valves and cocks**

- 1.7.1 All the valves and cocks are to be so designed and constructed so that the valve covers or glands will not slacken up when the valves are operated.
- 1.7.2 All the valves are to be designed to close with right hand (clockwise when facing the end of the stem) motion of the wheel of the valve.
- 1.7.3 All the valves and cocks are to be fitted in places where they are easily accessible at all times and are to be fitted with legible name plates indicating their function in the system and their installation is to be such that it can be readily observed that they are open or closed.
- 1.7.4 All the valves and cocks fitted with remote control are to be provided with local manual control independent of the remote control system inoperable.
- 1.7.5 The valves, cocks and other fittings which are attached directly to plating, which is required to be of watertight construction, are to be secured to the plating by means of studs screwed into the plating and not by bolts passing through clearance holes. Alternatively the studs may be welded to the plating.

**1.8 Shipside fittings (Other than sanitary discharges and scuppers)**

- 1.8.1 Al sea inlet and over board discharge valves are to be fitted in either of the following ways:-
  - a) Directly on the shell plating;
  - b) To the plating of fabricated steel water boxes of rigid construction integral with the vessel's plating;
  - c) To short, rigid distance pieces welded to the shell plating.
- 1.8.2 All valves and cocks fitted directly to the shell plating are to have spigots extending through the plating. These spigot on valves may however be omitted if the valves are fitted on pads which themselves from spigots in way of plating.
- 1.8.3 Valves and cocks are to be attached to the shell plating by bolts tapped into the plating and fitted with countersunk heads, or by studs screwed into heavy pads fitted to the plating. The stud holes are not to penetrate the pad plating.
- 1.8.4 Vessel side valves and fittings, if made of steel or material with low corrosion resistance, are to be suitably protected against wastage.
- 1.8.5 Gratings are to be fitted at all openings in ship's side for inlet of seawater. The net area through the gratings is to be at least twice the area of the valves connected to the opening.

- 1.8.6 The scantlings of valves and valve stools fitted with steam, or compressed air clearing connections are to be suitable for the maximum pressure to which the valves and stools may be subjected.

**1.9 Piping installation**

- 1.9.1 Heavy pipes and valves are to be so supported that their weight is not taken up by connected pumps and fittings.
- 1.9.2 Support of the pipes is to be such that detrimental vibrations do not arise in the system.
- 1.9.3 Where pipes are carried through watertight bulkheads or tank tops, means are to be made to ensure the integrity of the water tightness of the compartment.
- 1.9.4 As far as possible, installation of pipes for water, oil, or steam, is to be avoided near electric switchboards. If this is impracticable, all the joints in pipe line and valves are to be at a safe distance from the switchboards and shielded to prevent damage to switchboard.
- 1.9.5 Provision is to be made to take care of expansion or contraction stresses in pipes due to temperature stresses or working of the hull.
- 1.9.6 Expansion pieces of approved type, made of oil resistant reinforced rubber or other approved material may be used in circulating water systems in machinery spaces.
- 1.9.7 All piping systems, where a pressure greater than the designed pressure could be developed, are to be protected by suitable relief valves.
- 1.9.8 All pipes, situated in cargo-spaces, fish holds or other spaces, where they can be damaged mechanically, are to be suitably protected.
- 1.9.9 All pipes which pass through chambers intended for the carriage or storage of refrigerated cargo are to be well insulated. In case the temperature of the chamber is below 0°C the pipes are to be insulated from the ship's structure also, except at positions where the temperature of ship's structure is always above 0°C and is controlled by outside temperature.

Air refreshing pipes leading to and from refrigerated chambers need not be insulated from the ship's structure.



## **Section 2**

### **Bilge and Ballast Piping System**

#### **2.1 General**

- 2.1.1 All vessels are to be provided with necessary pumps, suction and discharge piping and means of drainage so arranged that any compartment can be pumped out effectively, when the vessel is on an even keel and is either upright or has a list of not more than 5 degrees, through at least one suction, except from machinery spaces where at least two suctions are required, one of which is to be a branch bilge suction and the other is to be a direct bilge suction. Wing suctions will, generally, be necessary for this purpose, except for short narrow compartments, where a single suction may be sufficient.
- 2.1.2 All passenger vessels are to be provided with an efficient bilge pumping plant capable of pumping from and draining any watertight compartment under all practicable conditions after a casualty whether the vessel is upright or listed.
- 2.1.3 Attention is drawn to any relevant statutory requirements of the National Authority of the country in which the vessels is to be registered.

#### **2.2 Drainage of cargo holds**

- 2.2.1 In vessels having only one hold, and this over 30 (m) in length, bilge suctions are to be provided in the fore and after sections of the hold.
- 2.2.2 In vessels having a flat bottom with breadth exceeding 5 (m), bilge suctions are to be fitted at the wings.
- 2.2.3 Where close ceilings or continuous gusset plates are fitted over the bilges, arrangements are to be made whereby the water in the hold may find its way to the suction pipes.
- 2.2.4 In vessels fitted with double bottoms, suitable located bilge wells are to be provided.

#### **2.3 Drainage from fore and aft peaks**

- 2.3.1 Where the peaks are used as tanks, a power pump suction is to be led to each tank, except in case of small tanks (generally not exceeding 2 (m<sup>2</sup>)) used for the carriage of domestic fresh water where hand pumps may be used.
- 2.3.2 The peaks may be drained by hand pumps provided the peaks are not used as tanks and they are not connected to bilge main. The suction lift is to be well within the capacity of the hand pumps and is not to exceed 7.3 (m).

The after peak may be drained by means of a self-closing cock situated in a well-lighted and accessible position, and drained into engine room or tunnel.

- 2.3.3 The collision bulkhead is not to be pierced below the bulkhead deck by more than one pipe for dealing with the contents inside the fore peak tank except as permitted in 2.3.4. The pipe is to be provided with a screw down valve capable of being operated from above the bulk head deck and the chest of the valve is to be secured to the collision bulk head inside the tank except as permitted by.

- 2.3.4 An indicator is to be provided to indicate whether the valve is open or shut.

In vessels, other than passenger vessels, where the forepeak is divided into two compartments, the collision bulkhead may be pierced by two pipes, i.e. one for each compartment and fitted as in 2.3.3.

- 2.3.5 In vessels other than passenger vessels, the valve required by 2.3.3 may be fitted on the after side of the collision bulkhead, provided the valve is readily accessible at all times and is not subject to mechanical damage.

## **2.4 Drainage from tanks, cofferdams and void spaces**

- 2.4.1 All the tanks except self-draining tanks, whether for water ballast, oil fuel, liquid cargoes, etc. are to be provided with suction pipes led to suitable power pumps. The pumping plant is to be so arranged that any water or liquid within any compartment of the vessel can be pumped out through at least one suction, when the vessel is on an even keel and is either upright or has list of not more than 5 degrees.

- 2.4.2 Where the length of the ballast tank exceeds 30 (m), an additional suction is to be provided at the forward end of the tank. Where the width of the tank is unusually large, suction near the centerline in addition to wing suction may be required.

- 2.4.3 Suction pipes from the coffer dam and void spaces are to be led to the main bilge line.

- 2.4.4 In vessels where deep tanks may be used for either water ballast or dry cargo, provision is to be made for blanking the water ballast suction and filling when the tank is being used for carrying cargo and for blanking the bilge line when the tank is being used for carriage of water ballast.

## **2.5 Drainage from spaces above fore and after peaks and above machinery spaces**

- 2.5.1 Provision is to be made for the drainage of chain locker and watertight compartments above the after peak tank by hand or power pump suctions.

- 2.5.2 Steering gear compartments or other small enclosed spaces situated above the after peak tanks are to be provided with suitable means of drainage, either by hand or power bilge suctions.

- 2.5.3 If the compartments referred to in 2.5.2 are adequately isolated from the adjacent twin decks, they may be drained by scuppers of not less than 38 (mm) bore, discharging into the tunnel (or machinery spaces in case of vessels with machinery aft) and fitted with self-closing cocks situated in well lighted and visible positions. These arrangements are not specially approved in relation to sub division considerations.
- 2.5.4 Accommodation spaces which overhang machinery spaces may also be drained in 2.5.3.

## **2.6 Drainage from machinery spaces**

- 2.6.1 The bilge drainage arrangements for machinery spaces are to be in accordance with the requirements of 2.1.
- 2.6.2 In vessels in which the propelling machinery is situated at the after end of the vessel. It will generally be necessary for the bilge suctions to be fitted in the forward wings as well as in the after end of the machinery space, but each case will be dealt with according to the size and structural arrangements of the compartment.
- 2.6.3 Where the machinery space is divided into watertight compartments, the drainage system for all compartments except for main engine room is to be same as for cargo hold except that one direct bilge suction from each watertight compartment would also be required.

## **2.7 Sizes of bilge suctions**

- 2.7.1 The internal diameter of the bilge pipes is not to be less than that found by the following formula to the nearest 5 (mm) commercial size available:-

$$a) \quad d_m = 1.5\sqrt{L(B+D)} + 25(m)$$

$$b) \quad d_m = 2.0\sqrt{C(B=D)} + 25(m)$$

Where,

$d_m$  = internal diameter of bilge main (mm);

$d_b$  = internal diameter of branch bilge (mm);

L = Rule length of vessel (m);

B = Molded breadth of vessel (m);

C = Length of the compartment (m);

D = Molded depth to bulkhead deck (m).

- 2.7.2 In any case, bilge main suction line and branch bilge suction line diameters are not to be less than 40 (mm) and the diameter of that main bilge line is not be less than of the branch bilge line.

- 2.7.3 The internal diameter of the direct bilge suction is not to have less than the main bilge line when connected to a power pump and not less than branch bilge suction when connected to a hand pump.
- 2.7.4 In oil tankers and similar vessels, where the engine room pumps do not deal with bilge drainage outside the machinery spaces, the rule diameter of the bilge main may be reduced provided the proposed cross-sectional area of the bilge main is not less than twice that required for the branch bilge suction in machinery spaces.
- 2.7.5 The area of each branch pipe connecting the bilge main to a distribution chest is to be not less than the sum of the areas required by the rules for the two largest branch bilge suction pipes connected to that chest, but need not be greater than that required for the main bilge line.

## **2.8 Bilge pumps and ejectors**

- 2.8.1 In vessels with main propulsion engines up to 220 (kW) (300 shp), at least one power bilge is to be provided which may be driven by the main engines. In addition hand pump suctions are to be fitted. In vessels where the main propulsion engines power exceeds 220 (kW) (300 shp) at least two power bilge pumps are to be provided and at least one of which is to be independently driven. See also 2.11 for requirements regarding passenger vessels.

- 2.8.1 The capacity of the bilge pump may be found by the following formula:-

$$Q = 5.75 \times 10^{-3} \times d^2 (\text{m}^3/\text{hour})$$

Where,

Q = capacity of pump (m<sup>3</sup>/hour)

d = rule diameter of bilge main (mm).

- 2.8.3 In vessels, other than passenger vessels, where one bilge pump is of slightly less than rule capacity, the deficiency may be made good by an excess capacity of the other pump. In general this deficiency is to be limited to 30 percent.
- 2.8.4 An ejector in conjunction with a sea water pump may be accepted as a substitute for independent power bilge pump. This however, is not acceptable on passenger vessels.

## **2.9 Pump types**

- 2.9.1 The bilge pumps required by the rules are to be of self-priming type, unless an approved priming system is provided for these vessels.
- 2.9.2 General Service pumps and ballasts pumps may be accepted as independent power bilge pumps provided:-
- a) Their capacity is adequate and in accordance with 2.8.2;

- b) These pumps together with the pipelines to which they are connected, are fitted with necessary devices to ensure that there is no risk of entry of water or oil fuel in the holds or machinery spaces.

## **2.10 Bilge piping arrangements and fittings**

- 2.10.1 Bilge pipes are not, as far as possible, to pass through double bottom tanks. If unavoidable, such bilge pipes are to be of heavy gauge, with welded joints or heavy flanged joints and are to be tested after fitting to the same pressure as the tanks through which they pass.
- 2.10.2 The parts of bilge pipes passing through deep tanks, intended to carry water ballast, fresh water, liquid cargo or fuel oil are normally to be contained in a pipe tunnel, but where this is not done, the pipes are to be of heavy gauge with welded or heavy flange joints. The open ends of such pipes are to be fitted with non-return valves. The pipes are to be tested, after fitting, to a pressure of not less than the maximum head to which the tanks may be subjected.
- 2.10.3 Expansion bends, not glands, are to be fitted to pipes passing through double bottom tanks or deep tanks.
- 2.10.4 The intactness of the machinery spaces, bulkheads and of tunnel plating is not to be impaired by fitting of scuppers discharging into machinery spaces or tunnel from adjacent compartments which are situated below the bulkhead deck. These scuppers may, however, be led into a strong built scupper drain tank situated in the machinery space or tunnel but closed to these spaces and drained by means of a suction of appropriate size led from the main bilge line through a screw-down non-return valve.
  - a) The scupper tank air pipe is to be led above the bulkhead deck and provision is to be made for ascertaining the level of the water in the tank:
  - b) Where one tank is used for the drainage of several watertight compartments, the scupper pipes are to be provided with screw-down non-return valves.
- 2.10.5 No drain valve or cock is to be fitted to the collision bulkhead. Drain valves or cocks are not to be fitted to other watertight bulkheads if alternative means of drainage are practicable. These arrangements are not permissible in passenger vessels.
- 2.10.6 Where drain valves or cocks are fitted to bulkhead other, than collision bulkhead, as permitted by 2.10.5, the drain valves or cocks are to be at all times readily accessible and are to be capable of being shut off from positions above the bulkhead deck. Indicators are to be provided to show whether the drains are open or shut.

- 2.10.7 Bilge pipes which are required for draining cargo or machinery spaces are to be entirely distinct from sea inlet pipes or from pipes which may be used for filling or emptying spaces where water or oil is carried. This does not, however, exclude a bilge ejection connection, a connecting pipe from a pump to its suction valve chest, or a deep tank suction pipe suitably connected through a change-over device to bilge, ballast or oil line.
- 2.10.8 The arrangement of pumps, valves and piping is to be such that any pump could be opened up for over haul and repairs without affecting the operations of the other pumps.
- 2.10.9 The arrangement of valves, pumps, cocks and their pipe connections is to be such as to prevent the possibility of placing one watertight compartment in communication with another, or of cargo spaces, machinery spaces or other dry spaces coming in communication with the sea or the tanks. For this purpose the bilge suction, pipe of any pump also having sea suction is to be fitted with a non-return valve which cannot permit communication between the bilges and the sea or the compartments in use as tanks.
- 2.10.10 Screw-down non-return valves are to be provided in the following fittings:-
- a) Bilge distribution chest valves;
  - b) Direct bilge suction and bilge pump connection to main line;
  - c) Bilge suction hose connections on the pumps or on the main line;
  - d) Emergency bilge suction.
- 2.10.11 Bilge suction pipes from machinery spaces and shaft tunnel, except emergency bilge suction, are to be led from easily accessible mud boxes fitted with straight tail pipes to the bilges. The open ends of the tail pipes are not to be fitted with strum boxes. The mud boxes are to be provided with covers which can be easily opened and closed for cleaning purposes.
- 2.10.12 Strum boxes are to be fitted to the open ends of bilge suction pipes from the cargo holds. The diameter of holes from these strum boxes is not to be more than 10 (mm) and the total area of the holes is not to be less than twice the area of the pipes.
- 2.10.13 Where access manholes to bilge wells are necessary, they are to be fitted as near to the suction strums as practicable.
- 2.10.14 adequate distance is to be provided between the open ends of suction pipes and bilge well bottom to permit adequate and easy flow of water and to facilitate cleaning.

2.10.15 All the valves, cocks and mud boxes are to be located in easily accessible positions above or at the same level as the floor plates. Where this is unavoidable, they may be fitted immediately below the floor plates provided the floor plates are capable of being opened and closed easily and suitably name plates are fitted indicating the fittings below.

2.10.16 Where relief valves are fitted to pumps having sea connections, these valves are to be fitted in readily visible positions above the platform. The arrangement is to be such that any discharge from the relief valves will also be readily visible

2.10.17 Where non-return valves are fitted to the open ends of bilge suction pipes in cargo holds in order to decrease the risk of flooding, they are to be of an approved type which does not offer undue obstruction to the flow of water.

## **2.11 Additional requirements for passenger vessels**

2.11.1 Where practicable, the power bilge pumps are to be placed in watertight compartments so arranged or situated that these compartments will not readily be flooded by the same damage. If the engines and boilers are in two or more watertight compartments, the pumps available for bilge service are to be distributed throughout these compartments as far as is possible.

2.11.2 In passenger vessels the arrangements are to be such that at least one power pump is available for use in all ordinary circumstances in which a vessel may be flooded at sea. This requirement will be satisfied if:

- a) One of the required pumps is an emergency pump of reliable submersible type having a source of power situated above the bulkhead deck; OR
- b) The pumps and their sources of power are so disposed throughout the length of the vessel that under any condition of flooding which the vessel is required by statutory requirements to withstand, at least one pump in undamaged compartment will be available.

2.11.3 Provision is to be made to prevent the compartment served by any bilge suction pipe being flooded in the event of the pipe being severed, or otherwise damaged by collision or grounding in any other compartment. For this purpose where the pipe is at any part situated nearer the side of the vessel than one-fifth the breadth of the vessel (measured at right angles to the centerline at the level of the deepest sub-division load line), or in a duct keel, a non-return valve is to be fitted to the pipe in the compartment containing the open end.

2.11.4 All the distribution boxes, cocks and valves in connection with the bilge pumping arrangements are to be in positions which are accessible at all times under ordinary circumstances. They are to be so arranged that, in the event of flooding, one of the bilge pumps may be operative on any compartment, in addition damage to a pump or its pipe connection to the bilge main outboard of a line drawn at one-fifth of the breadth of the vessel is not to put the bilge system out of action. If there is only one system of pipes common to all the pumps, the necessary cocks or vales for controlling the bilge suction must be capable of being operated from above the bulkhead deck. Where in addition to the main bilge pumping system and so arranged that a pump is capable of operating on any compartment under flooding conditions in that case only the cocks and valves necessary for the operation of the emergency system need be capable of being operated from above the bulkhead deck.

2.11.5 All valves and cocks mentioned in 2.11.4 which can be operated from above the bulkhead deck shall have their controls at their place of operation clearly marked and provided with means to indicate whether they are open or closed.

## **2.12 Ballast system**

2.12.1 Provision is to be made for ballasting and de-ballasting all the ballast tanks by pipe lines which are entirely separate and distinct from pipe lines used for bilging.

2.12.2 Where the length of the ballast tanks exceeds 30 (m), an additional suction is to be provided at the forward end of the tanks. Where the width of the tank is usually large, suction near the centerline in addition to wing suction may be required.

## **Section 3**

### **Air and Sounding Piping System**

#### **3.1 General**

3.1.1 Reference to oil in this section is to be taken to mean oil which has a flash point of 60° C or above (closed cup test).

3.1.2 The positions of vent, overflow and sounding pipes fitted above the weather deck are to be of steel.

3.1.3 Name plates are to be affixed to the upper ends of all vent and sounding pipes.

#### **3.2 Air pipes**

3.2.1 Vent pipes are to be fitted to all tanks, cofferdams, tunnels and other compartments which are not fitted with alternative ventilation arrangements.



- 3.2.2 The vent pipes are to be fitted at the opposite end of the tank to which the filling pipes are placed and / or at the highest part of the tank and are to be of the self draining type. Where the tank top is of unusual or irregular profile, special consideration will be given to the number and positions of the vent pipes.
- 3.2.3 Tanks provided with anodes for cathodic protection are to be provided with vent pipes at forward and aft ends.
- 3.2.4 Vent pipes to double bottom tanks, deep tanks extending to the shell plating or tanks which can be run up from the sea and sea chests are to be run up from the sea and sea chests are to be led above the bulkhead deck.
- 3.2.5 Vent pipes to oil fuel and cargo oil tanks, cofferdams, all tanks which can be pumped up, shaft tunnels and pipe tunnels are to be led above the bulkhead deck and to open air.
- 3.2.6 Vent pipes from lubricating oil storage tanks may terminate in the machinery spaces, provided that the open ends are so situated that issuing oil cannot come into contact with electrical equipment or heated surfaces.
- 3.2.7 The open ends of vent pipes to oil fuel and cargo oil tanks are to be situated where no danger will be incurred from issuing oil or vapor when the tank is being filled.
- 3.2.8 For details regarding height and closing devices for vent pipes see Pt.3, Ch.11.
- 3.2.9 The open ends of vent pipes to oil fuel, cargo oil and ballast tanks fitted with anodes for cathodic protection, are to be fitted with a wire gauze diaphragm of in-corrodible material which can be readily removed from cleaning. The clear area through the wire gauze is to be at least equal to the area of the vent pipe.
- 3.2.10 In the case of all tanks which can be pumped up either by vessel's pumps or by shore pumps through a filling main, the total cross-sectional area of the vent pipes to each tank, or of the overflow pipes where an overflow system is provided, is to be not less than 25 percent greater than the effective area of the respective filling pipes.

### **3.3 Sounding arrangements**

- 3.3.1 All tanks, cofferdams and pipe tunnels are to be provided with sounding pipes or other approved means for ascertaining the level of liquid in the tanks. Bilges of compartments which are not at all times readily accessible are to be provided with sounding pipes. The sounding are to be taken as near the suction pipes as practicable.
- 3.3.2 Where gauge glasses are used for indicating the level of liquid in tanks containing lubricating oil, oil fuel or other flammable liquid, the glasses are to be of heat resisting quality, adequately supported, protected from mechanical damage and fitted

with self-closing valves at the lower ends and at the top ends if these are connected to the tanks below the maximum liquid level.

- 3.3.3 Except as permitted by 3.3.4 sounding pipes are to be led to positions above the bulkhead deck which are at all time accessible and in the case of oil fuel tanks, cargo oil tanks and lubricating oil tanks, the sounding pipes are to be lead to safe positions on the open deck.
- 3.3.4 Short sounding pipes may be fitted to double bottom tanks and cofferdams in shaft tunnels and machinery spaces provided the pipes are to readily accessible. Short sounding pipes to oil fuel tanks, cargo oil tanks and lubricating oil tanks are not to be placed in the vicinity of boilers, pre-heaters, heated surfaces, electric generators or motor with commutator or collector rings or electric or electric appliances which are not totally enclosed. The short sounding pips are to be arranged in such a way that overflow or oil spray will not reach any of machinery components mentioned above. The short sounding pipes are to be fitted with self-closing cocks having cylindrical plugs with weight loaded levers permanently attached and with pedals for opening or other approved arrangements. Short sounding pipes to tanks not intended for oil are to be fitted with screw caps attached by chain to the pipe or with shut off cocks.
- 3.3.5 In passenger vessels, short sounding pipes are permissible only for sounding cofferdams and double bottom tanks situated in the machinery space and are in all cases to be fitted with self closing cocks as described in 3.3.4.
- 3.3.6 Striking plates of adequate thickness and size are to be fitted under open ended sounding pipes. Where slotted pipes having closed ends are employed, the closing plugs are to be of substantial construction.
- 3.3.7 The upper ends of all sounding pipes are to be provided with efficient closing devices. The sounding pipes are to be arranged to be as straight as practicable, and if curved the curvature is to be large enough to permit easy passage of sounding rod/chain.

## **Section 4**

### **Fuel Oil System**

#### **4.1 General**

- 4.1.1 Oil fuel for machinery and boilers is normally to have a flash point now lower than 60° C (closed cup test). For emergency generators engines, the oil fuel is to have a flash point not lower than 43° C (closed cup test).
- 4.1.2 Fuels with flash point lower than 60° C may be used in vessels intended for service restricted to geographical limits where it can be ensured that the temperature of the machinery and boiler spaces will always be 10° C below the flash point of fuel. In such case safety precautions and the arrangements for storage and pumping will be specially considered. However, the flash point of the fuel is not to be less than 43° C unless specially approved.

#### **4.2 Oil fuel tanks**

- 4.2.1 Oil fuel tanks are to be separated from fresh water and lubricating oil tanks by means of cofferdams.
- 4.2.2 Oil fuel tanks are not to be located directly above the highly heated surfaces.

#### **4.3 Oil fuel piping**

- 4.3.1 Oil fuel pressure pipes are to be led, where practicable, remote from heated surfaces and electrical appliances, but where this is impracticable the pipes are to have a minimum number of joints and are to be led in well lighted and readily visible positions.
- 4.3.2 Transfer, suction and other low pressure oil pipes and all pipes passing through oil storage tanks are to be made of cast iron or steel, having flanged joints suitable for a working pressure or not less than 0.69 (N/mm<sup>2</sup>). The flanges are to be machined and the jointing material is to be impervious to oil. Where the pipes are 25 (mm) bore or less, they may be seamless copper alloy, except those which pass through storage tanks.
- 4.3.3 Pipes in connection with compartments storing fresh water are to be separate and distinct from any pipes which may be used for oil or oily water and are not to be led through tanks which contain oil, nor are oil pipes to be led through fresh water tanks.
- 4.3.4 Pipes conveying vegetable oils or similar cargo oils are not to be led through oil fuel tanks, nor are oil fuel pipes to be led through tanks containing such cargoes.

- 4.3.5 In passenger vessels, provision is to be made for the transfer of oil fuel from any oil fuel storage or settling tank to any other oil fuel storage tanks.

#### **4.4 Arrangement of valves, cocks, pumps and fittings**

- 4.4.1 The oil fuel and pumping piping arrangements are to be distinct from other pumping systems as far as practicable and the means provided for preventing dangerous inter connection in service are to be thoroughly effective.
- 4.4.2 All valves and cocks forming part of the oil fuel installation are to be capable of being controlled from readily accessible positions which, in the machinery spaces are to be above the working platform.
- 4.4.3 Every oil fuel suction pipe from a double bottom tank is to be fitted with a valve or a cock.
- 4.4.4 For oil fuel tanks which are situated above the double bottom tanks the inlet and outlet, pipes which are connected to the tank at a point lower than the outlet of the overflow pipe or below the top of the tanks without an overflow pipe, are to be fitted with shut off valves located on the tank itself.
- 4.4.5 In the machinery spaces valves, mentioned in 4.4.4, are to be capable of 'being closed locally and from positions outside these spaces which will always be accessible in the event of fire occurring in these spaces. Instructions for closing the valves are to be indicated at the valves and at the remote control positions.
- 4.4.6 Settling tanks are to be provided with means of draining water from bottom of the tanks. If the settling tanks are not provided, the oil fuel bunkers or daily service tanks are to be fitted with water drains.
- Open drains for removing water from oil tanks are to be fitted with valves or cocks of self-closing type and suitable provision is to be made for collecting the oily discharge.
- 4.4.7 Where a power driven pump is necessary for transferring oil fuel, a stand by pump is to be provided and connected ready for use, or alternatively, emergency connections may be made to another suitable power driven pump.
- 4.4.8 All pumps which are capable of developing a pressure exceeding the design pressure of the system are to be provided with relief valves. Each relief valve is to be in close circuit i.e. arranged to discharge back to the suction side of the pump and to effectively limit the pump discharge pressure to the design pressure of the system.
- 4.4.9 Valves or cocks are to be interposed between the pumps on the suction and discharge pipes in order that any pump may be shut off for opening up and over haul.

- 4.4.10 Drip trays are to be fitted under all oil fuel appliances which are required to be opened up frequently for cleaning or adjustment.

#### **4.5 Filling arrangements**

- 4.5.1 The bunkering of the vessel is to be carried out through a permanently fitted pipeline, provided with the required fittings and ensuring fuel delivery to all storage tanks. The open end of the fitting pipe is to be led to the tank bottom.

In passenger vessels fuel bunkering stations are to be isolated from other spaces and are to be efficiently drained and ventilated.

- 4.5.2 Provision is to be made against over-pressure in the filling pipes, and any relief valve fitted for this purpose is to be discharged in to an overflow tank or other safe position.

#### **4.6 Oil fuel burning arrangements**

- 4.6.1 Filters are to be fitted in the supply lines to the main and auxiliary machinery. For non-redundant units for essential services, it must be possible to clean the filters without stopping the unit or reducing the supply of the filtered oil to the unit.

For auxiliary engines one single oil fuel filter for each engine may be accepted.

- 4.6.2 Where an oil fuel booster pump is fitted, which is essential to the operation of the main engine (s), a standby pump is to be provided. The standby pump is to be connected ready for immediate use but where two or more main engines are fitted, each with its own pump, a complete spare pump may be accepted provided that it readily accessible and can be easily installed.

- 4.6.3 Where pump are provided for fuel valve cooling, the arrangements are to be as in 4.6.2.

#### **4.7 Remote stop of oil fuel pumps and fans**

- 4.7.1 Emergency stop for power supply to the following pumps and fans is to be arranged from a central place outside the engine and boiler room:-

- Oil fuel transfer pump;
- Oil fuel booster pump;
- Nozzle cooling pumps when oil fuel is used as coolant;
- Oil fuel purifiers;
- Pumps for oil-burning installations;
- Fans for ventilation of engine rooms.

## **Section 5**

### **Engine Cooling Water Systems**

#### **5.1 General**

5.1.1 Centrifugal cooling water pumps are to be installed as low as possible in the vessel.

#### **5.2 Cooling water main supply**

5.2.1 Provision is to be made for an adequate supply of cooling water to the main propelling machinery and essential auxiliary engines, also to lubricating oil and fresh water coolers, where these coolers are fitted. The cooling water pump(s) may be worked from the engines or be driven independently.

#### **5.3 Cooling water stand by supply.**

5.3.1 Provision is also to be made for a separate supply of cooling water from a suitable independent pump of adequate capacity.

5.3.2 The following arrangements are acceptable, depending on the purpose for which the cooling water is intended:

- a) Where only one main engine, with power exceeding 370 (kW) (500 shp), is fitted, the standby pump is to be connected ready for immediate use;
- b) Where more than one main engine is fitted, each with its own pump, a complete spare pump of each type may be accepted;
- c) Where fresh water cooling is employed for main / auxiliary engines, a standby means of cooling need not be fitted if there are suitable emergency connections from alt water system;
- d) Where each auxiliary is fitted with a cooling water pump, standby means of cooling need not be provided auxiliaries. Where, however a group of auxiliaries is supplied with cooling water from a common system, a standby cooling water pump is to be provided for this system. This pump is to be connected ready for immediate use and may be a suitable general service pump.

5.3.3 When selecting a pump for standby purposes, consideration is to be given to the maximum pressure which it can develop if the overboard discharge valve is partly or fully closed and, when necessary, condenser doors, water boxes, etc. are to be protected by an approved device against inadvertent over pressure.

**5.4 Relief valves on cooling water pumps**

- 5.4.1 Where cooling water pumps can develop a pressure head greater than the design pressure of the system, they are to be provided with relief valves on the pump discharge to effectively limit the pump discharge pressure to the design pressure of the system.

**5.5 Sea inlets for cooling water pumps**

- 5.5.1 Sea-water cooling systems for main and auxiliary machinery are to be connected to at least two cooling water inlets preferably on opposite sides of the vessel.
- 5.5.2 Where sea water is used for the direct cooling of main engines and auxiliaries, the sea water suction pipes are to be provided with strainers which can be cleaned without interrupting the cooling water supply.

**Section 6****Lubricating Oil Piping System****6.1 General**

- 6.1.1 Lubricating oil systems are to be entirely separated from other systems. This requirement, however, does not apply to hydraulic governing and maneuvering systems for main and auxiliary engines.
- 6.1.2 Lubricating oil tanks are to be separated from other tanks containing water, fuel oil or cargo oil by means of cofferdams.

**6.2 Pumps**

- 6.2.1 Where lubricating oil for the main engines (s) is circulated under pressure, a standby lubricating oil pump is to be provided where one engine is fitted and the output of the engine exceeds 370 (kW) (500 shp).
- 6.2.2 Satisfactory lubrication of the engines is to be ensured while starting and maneuvering.
- 6.2.3 Similar provisions to those of 6.2.1 and 6.2.2 are to be made where separate lubricating oil systems are employed for piston cooling, reduction gearing, oil operated couplings and controllable pitch propellers, unless approved alternative arrangements are provided. Where the oil glands for stern tubes are provided with oil circulating pump, and the continuous running of this pump is necessary during normal operation, then a standby pump for this purpose is to be provided.
- 6.2.4 Independently driven rotary type pumps are to be fitted with non-return valves on the discharge side of the pumps.

- 6.2.5 A relief valve in close circuit is to be fitted on the pump discharge if the pump is capable of developing a pressure exceeding the design pressure of the system, the relief valve is to be effectively limit the pump discharge pressure to the design pressure of the system.

### **6.3 Control of pumps and alarms**

- 6.3.1 The power supply, to all independently driven lubricating oil pumps is to be capable of being stopped from a position outside the space which will always be accessible in the event of fire occurring in the compartment in which they are situated, as well as from the compartment itself.
- 6.3.2 All main and auxiliary engines intended for essential services are to be provided with means of indicating the lubricating oil pressure supply to them. Where such engines and turbines are of more than 75 (kW) (100 shp), audible and visual alarms are to be fitted to given warning of an appreciable reduction in pressure of the lubricating oil supply. Further, these alarms are to be actuated from the outlet side of any restrictions, such as filters, coolers, etc.

### **6.4 Filters**

- 6.4.1 In systems, where lubricating oil is circulated under pressure, provision is to be made for efficient filtration of the oil. For non-redundant units, for essential service, it must be possible to clean the filters without stopping the unit or reducing the supply of filtered oil to the units.

### **6.5 Valves and cocks on lubricating oil tanks**

- 6.5.1 Outlet valves and cocks on lubricating oil service tanks, other than double bottom tanks, situated in machinery spaces are to be capable of being closed locally from position outside the space which will always be accessible in the event of fire occurring in these spaces. Remote controls need only be fitted to outlet valves and cocks which are open in normal service and are not required for other outlets such as those on storage tanks.

## **Section 7**

### **Engine Exhaust Gas Piping Systems**

#### **7.1 General**

- 7.1.1 Where the surface temperature of the exhaust pipes and silencer may exceed 220° C, they are to be water cooled or efficiently lagged.



- 7.1.2 Where lagging covering the exhaust piping including flanges, is oil-absorbing or may permit penetration of oil, the lagging is to be encased in sheet metal or equivalent. In locations where the surveyor is satisfied that oil impingement could not occur, the lagging need not be encased.
- 7.1.3 Exhaust pipes which are led overboard near the waterline are to be protected against the possibility of water finding its way in board.  
Where the exhaust is cooled by water spray, the exhaust pipes are to be self-draining overboard.
- 7.1.4 Exhaust pipes of two or more engines are not to be connected together, but are to be led separately to the atmosphere unless arranged to prevent the return of the gases to an idle engine.
- 7.1.5 In two-stroke engines fitted with exhaust gas turbo-chargers which operate on the impulse systems, provision is to be made to prevent broken piston rings entering the turbine casing and causing damage to blades and nozzle rings.

## **Section 8**

### **Pumping and Piping Systems for Vessels not fitted with Propelling Machinery**

#### **8.1 Scope**

- 8.1.1 Following requirements are applicable to vessels not fitted with propelling machinery.

#### **8.2 Vessels without auxiliary power**

- 8.2.1 Hand pumps are to be fitted in number and position, as may be required for the efficient drainage of the vessel.
- 8.2.2 In general, one hand pump is to be provided for each compartment. Alternatively, two pumps connected to a bilge main, having at least one branch to each compartment are to be provided through non-return valves.
- 8.2.3 The hand pumps are to be capable of being worked from the upper deck or from positions above the load waterline which are at all times readily accessible. The suction list is not to exceed 7.3 (m) and is to be well within the capacity of the pump.
- 8.2.4 The pump capacity is to be based upon the diameter of the suction pipe required for compartment and as determined in Sec. 2.

#### **8.3 Vessels with auxiliary power**

- 8.3.1. In vessels in which auxiliary power is available on board, power pump suctions are to be provided for dealing with the drainage of tanks and of the bilges of the principal compartments.
- 8.3.2. The pumping arrangements are to be as required for self-propelled vessels, so far as these requirements are applicable.

**Chapter 4**  
**Prime Movers and Propulsion Shafting Systems**  
**Contents**

**Section**

- 1 General
- 2 Main Propulsion Shafting
- 3 Propellers
- 4 Vibrations and Alignment

**Section 1**  
**General**

**1.1 General**

- 1.1.1 The requirements of this Chapter are applicable to all vessels but may be modified for vessels intended for special services.
- 1.1.2 Prime movers of electric generators of less than 50 (kW) capacity, supplying power for lightening loads only, when the vessel is in harbor, need not be built under survey.
- 1.1.3 Attention is drawn to any relevant statutory requirements of the country in which the vessel is to be registered.
- 1.1.4 Power transmission systems not specified in this Chapter will be specially considered.

**1.2 Materials**

- 1.2.1 Materials intended for the main parts of the prime movers and power transmission systems are to be manufactured and tested in accordance with the requirements of Pt. 2, inspection and testing of materials, of rules & rules for the constructions and classification of steel vessels.

**1.3 Prime movers and reduction gearing**

- 1.3.1 Prime movers and reduction gearing are to be designed, manufactured and tested in accordance with the requirements of Rules and Rules for the Construction & Classification of Steel Vessels.

**1.4 Turning Gear**

- 1.4.1 Arrangements are to be provided to turn the prime movers of main propulsion systems and auxiliary drives.

## Section 2

### Main Propulsion Shafting

#### 2.1 Scope

- 2.1.1 The requirements of this section relate, in particular, to formulae for determining the diameters of shafting for main propulsion installations, but requirements for couplings, coupling bolts, keys, keyways, stern bushes and associated components are also included. The diameter of shafting as calculated may require to be modified as a result of alignment considerations and vibration characteristics (See Sec. 8) or the inclusion of stress raises, other than those contained in this section.

#### 2.2 Plans and Particulars

- 2.2.1 The following plans, in triplicate, together with the necessary particulars of the machinery, including the maximum power and revolutions per minute, are to be submitted for approval before the work is commenced:-

- Final gear shaft;
- Thrust shaft;
- Intermediate shafting;
- Tube shaft, where applicable;
- Tail shaft;
- Stern bush.

- 2.2.2 The specified minimum tensile strength of each shaft is to be stated.

- 2.2.3 A shafting arrangement plan indicating the relative position of the main engines, flywheel, flexible couplings, gearing, thrust block, line shafting and bearing, stern tube, 'A' brackets and propeller, as applicable, is to be submitted for information.

#### 2.3 Materials for shafting

- 2.3.1 The materials are to comply with the relevant requirement of Ch.5, Pt.2, Inspection and Testing of Materials, of Rules & Rules for the Construction and Classification of Steel Vessels. The specified minimum tensile strength of forgings is to be selected within the following general limits:-

- a) Carbon and carbon-manganese steel – 400 – 600 (N/m<sup>2</sup>)
- b) Alloy steels – Not exceeding 800 (N/m<sup>2</sup>)

- 2.3.2 Ultrasonic tests are required on shaft forgings where the diameters is 250 (mm) or greater.

## 2.4 Intermediate and thrust shafts

- 2.4.1 The diameter,  $d$  of the shaft is to be not less than determined by the following formula:-

$$d = 103. k a \sqrt[3]{\frac{4 P}{(U+1) R}} (m)$$

Where,

$a = 0.95$  for turbine installations, electric propulsion installations and oil engine installations with slip type couplings;

$= 1.0$  for other oil engine installations;

$k = 1.0$  for shafts with integral couplings flanges complying with 2.7 or shrink fit couplings;

$= 1.10$  for shafts with keyways, where the fillet radii in the transverse section of the bottom of the keyway are not to be less than  $0.0125 d$ ; after a length of  $0.2 d$  from the end of the keyway, the shaft diameter may be reduced to the diameter calculated with  $k = 1.0$ ;

$= 1.0$  for shafts with transverse or radial holes, where the diameter of the hole is not greater, than  $0.3 d$ ;

$= 1.20$  for shafts with longitudinal slots having a length of not more than  $1.4 d$  and a width of not more than  $0.2 d$ , where  $d$  is calculated with  $k = 1.0$ ;

$U$  = Specified minimum tensile strength of the material ( $N/mm^2$ )

$P$  = maximum shaft power (kW);

$R$  = Revolution per minute corresponding to maximum shaft power giving maximum torque.

- 2.4.2 For shafts with design features other than stated in 2.4.1 the value of  $k$  will be specifically considered.

## 2.5 Tail shafts and tube shafts

- 2.5.1 The diameter,  $d_p$ , of the tail shaft immediately forward of the forward face of the propeller boss or, if applicable, the forward face of the tail shaft flange, is to be not less than determined by the following formula:-

$$d_p = 103. k \sqrt[3]{\frac{4 P}{(U+1) R}} (m)$$

Where,

$k = 1.22$  for a shaft carrying a keyless propeller, or where the propeller is attached to an integral flange, and where the shaft is fitted with continuous liner or is oil lubricated and provided with an approved type of oil sealing gland;

$= 1.26$  for a shaft carrying a keyed propeller, and where the shaft is fitted with a continuous liner or is oil lubricated and provided with an approved type of oil sealing gland;

$= 1.25$  for a shaft carrying a keyless propeller, or where the propeller is attached to an integral flange and is fitted with water lubricated bearing with non-continuous shaft liners;

$= 1.29$  for a shaft carrying a keyed propeller and is fitted with water lubricated bearings with non-continuous shaft liners;

$U$  = Specified minimum tensile strength of the shaft ( $\text{N/mm}^2$ ), but is not to be taken greater than  $600 \text{ (N/mm}^2\text{)}$ ;

$P$ ,  $a$  and  $R$  are defined in 2.4.1

2.5.2 The diameter,  $d_p$  of the tail shaft determined in accordance with the formula in 2.5.1 is to extend over a length not less than that to the forward edge of the bearing immediately forward of the propeller of  $2.5 d_p$  whichever is the greater.

2.5.3 The diameter of the portion of the tail shaft and tube shaft forward of the length required by 2.5.2 to the forward end of the forward stern tube seal is to be determined in accordance with the formula in 2.5.1 except that;

$k = 1.15$  where  $k = 1.22$  or  $1.26$  as required by 2.5.1

$k = 1.18$  where  $k = 1.25$  or  $1.29$  are required by 2.5.1

The change of diameter from that required by 2.5.1 to that required by this clause should be gradual.

2.5.4 The taper of the shaft cone is normally not to be steeper than 1:12 on diameter in case of keyed shafts and 1:15 on diameter in case of key less shafts.

2.5.5 Tail shafts which run in stern tubes and tube shafts may have the diameter forward of the forward stern tube seal gradually reduced to the diameter of the intermediate shaft. Abrupt changes in shaft section at the tail shaft / tube shaft to intermediate shaft couplings is to be avoided.

## **2.6 Hollow shafts**

2.6.1 For hollow shafts where the bore exceeds 40 percent of the outside diameter of minimum shaft diameter is not to be less than that given by the following equation:-

$$d_0 = d \sqrt[3]{\left(1 - \left(\frac{d_1}{d_0}\right)^4\right) (m)}$$

where,

$d_0$  = outside diameter (mm).

$d$  = Rule size diameter of shaft (mm), calculated in accordance with 2.4 or 2.5

$d_1$  = diameter of central hole (mm).

- 2.6.2 Where the diameter of the central hole does not exceed 0.4 times the outside diameter, no increase over rule size need be provided.

## 2.7 Integral couplings

- 2.7.1 The thickness of coupling flanges is not to be less than the minimum required diameter of the coupling bolts calculated as in para 2.9, where  $U_B$  = or 0.2 times the rule diameter of the shaft under consideration, whichever is greater.
- 2.7.2 The fillet radius at the base of the coupling flange is to be not less than 0.08 of the diameter of the shaft at the coupling. The fillets are to have a smooth finish and are not to be recessed in way of nuts and bolt heads.
- 2.7.3 Where the propeller is attached by means of flange, the thickness of the flange is to be not less than 0.25 times the actual diameter of the adjacent part of the tail shaft. The fillet radius at the base of the coupling flange is to be not less than 0.125 times the diameter of the shaft at the coupling.

## 2.8 Demountable couplings

- 2.8.1 Couplings are to be made of steel or other approved ductile material. The strength of demountable couplings and keys is to be equivalent to that of the shaft. Couplings are to be accurately fitted to the shaft.
- 2.8.2 Hydraulic and other shrink fit couplings will be specifically considered upon submittal of detailed pre-loading and stress calculations and fitting instructions. In general, the torsional holding capacity is to be at least 2.8 times the transmitted torque and pre-load stress is not to exceed 70 percent of the yield strength.
- 2.8.3 Provision is to be made to resist astern pull.

## 2.9 Coupling bolts

- 2.9.1 The diameter of the coupling bolts of the fitted type at the joining faces of the coupling is to be not less than that given by the following formula:-

$$d_b = \sqrt{\frac{0.4}{N_B} \frac{d^3 (U+1)}{}} (m)$$

Where,

$d_b$  = diameter of the fitted coupling bolts (mm);

$d$  = required diameter (mm) for the shaft in accordance with 2.4 or 2.5 as appropriate calculated by taking the value of  $k$  as 1.0;

$U$  = specified minimum tensile strength of the shaft material in (N/mm<sup>2</sup>);

$U_B$  = specified minimum tensile strength of the bolt material in (N/mm<sup>2</sup>);

and also  $U \geq U_B \geq 1.7 U$ ;

$N$  = Number of bolts in the coupling;

$D$  = Pitch circle diameter of bolt holes (mm).

- 2.9.2 The diameter of the non-fitted bolts will be specially considered upon the submittal of detailed pre-loading and stress calculations and fitted instructions.

## **2.10 Tail shaft liners**

- 2.10.1 The thickness  $t$ , of bronze or gunmetal liners fitted on tail shafts, in way of bearings, is not to be less than given by following formula:-

$$t = \frac{1}{2} \sqrt{\frac{d_p}{U}} \quad (m)$$

Where,

$t$  = thickness of liner (mm);

$d_p$  = diameter of tail shaft under the liner (mm)

- 2.10.2 The thickness of the continuous liner between the bearings is not to be less than  $0.75t$ .
- 2.10.3 Continuous liners are preferably to be cast in one length. If made of several lengths, the joining of the separate pieces is to be made by welding through the whole thickness of liner before shrinking. In general, the load content of the gunmetal of each length forming a butt welded liner is not to exceed 0.5 percent. The composition of the electrode or filler rods is to be substantially lead free.
- 2.10.4 The liners are to withstand a hydraulic, pressure of  $0.2 \text{ (N/mm}^2\text{)}$  after rough machining.
- 2.10.5 The liners are to be carefully shrunk or forced upon the shaft by hydraulic pressure, and they are not to be secured by pins.
- 2.10.6 Effective means are to be provided for preventing water from reaching the shaft at the part between the after end of the liner and the propeller boss.
- 2.10.7 If the liner does not fit the shaft tightly between the bearing portions in the stern tube, the space between the shaft and the liner is to be filled with a plastic insoluble non-corrosive compound.

## 2.11 Keys and keyways

- 2.11.1 Round ended or sled-runner ended keys are to be used, and the key ways in the propeller boss and cone of the tail shaft are to be provided with a smooth fillet at the bottom of the keyways. The radius of the fillet is to be at least 0.0125 of the diameter of the tail shaft at the top of the cone. The sharp edges at the top of the keyways are to be removed.
- 2.11.2 Two screwed pins are to be provided for securing the key in the keyway and the forward pin is to be placed at least one-third of the length of the key from the end. The depth of the tapped holes for the screwed pins is not to exceed the pin diameter and the edges of the holes are to be slightly beveled.
- 2.11.3 The distance between the top of the cone and the forward end of the keyway is to be not less than 0.2 of the diameter of the tail shaft at the top of the cone.
- 2.11.4 The effective sectional area of the key in shear, is to be not less than  $\frac{d^3}{2.6d_1} (m^{-2})$

Where,

$d$  = diameter (mm), required for the intermediate shaft determined in accordance with 2.4, based on material having a specified minimum tensile strength of 400 (N/mm<sup>2</sup>);

$d_1$  = diameter of shaft at mid-length of the key (mm).

## 2.12 Stern tube and bearings

- 2.12.1 The length of the bearing in the stern bush next to and supporting the propeller is to be as follows:-
- For water lubricated bearings which are lined with lignum vitae, rubber composition or staves of approved plastic material; the length is to be not less than 4 times the rule diameter required for the tail shaft under the liner.
  - For bearings which are white-metal lined, oil lubricated and provided with an approved type of oil sealing gland; the length of the bearing is to be approximately twice the rule diameter required for the tail shaft and is to be such that the nominal bearing pressure will not exceed 0.8 (N/mm<sup>2</sup>). The length of the bearing is to be not less than 1.5 times its rule diameter.
  - For bearing of cast iron, bronze which are oil lubricated and fitted with an approved oil sealing gland; the length of the bearing is, in general, to be not less than 4 times the rule diameter required for tail shaft;
  - For bearing which are grease lubricated; the length of bearing is to be not less than 4 times the rule diameter required for the tail shaft;



- (e) For water lubricated bearing lined with two or more circumferentially spaced sectors of an approved plastics material, in which it can be shown that the sectors operate on hydrodynamic principles, the length of the bearing is to be such that the nominal bearing pressure will not exceed  $0.55 \text{ (N/mm}^2\text{)}$ . The length of the bearing is not to be less than twice actual diameter of shaft.
- 2.12.2 Forced water lubrication is to be provided for all bearings lined with rubber or plastics and for those bearings lined with lignum vitae where the shaft diameter is 380 (mm) or over. The supply water may come from a circulating pump or other pressure source. The water grooves in the bearings are to be of ample section and of a shape which will be little affected by wear down, particularly for bearings of the plastic type.
- 2.12.3 The shut off valve or cock controlling the supply of water is to be fitted direct to the after peak bulk head, or to the stern tube where the water supply enters the stern tube be forward of the bulk head.
- 2.12.4 Where a tank supplying lubricating oil to the stern tube is fitted, it is to be located above the load water line and is to be provided with a low level alarm device in the engine room.
- 2.12.5 Where stern bush bearings are oil lubricated, provision is to be made for cooling the oil by maintaining water in the after peak tank above the level of the stern tube or by other approved means. Means of ascertaining the temperature of the oil in the stern bush are also to be provided.
- 2.12.6 The oil seating glands used for stern tube bearing, which are oil lubricated, are to be of approved type.

### **Section 3**

#### **Propellers**

##### **3.1 Scope**

The requirements of this section cover the construction, material and in section of propellers.

##### **3.2 Plans and particulars**

- 3.2.1 A plan in triplicate, of the propeller is to be submitted for approval, together with the following particulars:-

- a) Maximum shaft power, P, in (kW);

- b) Revolutions per minute of the propeller at maximum power, R;
- c) Propeller diameter, D(m);
- d) Pitch at 25 percent radius (for solid propellers only).  $P_{0.25}(m)$ ;
- e) Pitch at 35 percent radius (for controllable pitch propellers only)  $P_{0.35}(m)$ ;
- h) Pitch at 70 percent radius,  $P_{0.7}, (m)$ ;
- g) Length of blade section of the expanded cylindrical section 15 25 percent radius (for solid propeller only),  $P_{0.7}, (m)$
- h) Length of blade section of expanded cylindrical section are 35 percent radius (for controllable pitch propellers only)  $L_{0.35}$  in (mm);
- i) Rake at blade tip measured at shaft axis (backward rake positive forward rake negative). K in (m);
- j) Number of blades N;
- k) Developed area ratio, a.

### 3.3 Materials

- 3.3.1 Castings for propellers and propeller blades are to comply with the requirement of Ch. 8 Pt.2, Inspection and Testing of Materials of Rules & Rules for the Construction and Classification of Steel Vessels. The specified minimum tensile strength is to be not less than started in Table 3.4.1.
- 3.3.2 When it is proposed to use materials which are not included in Table 3.4.1, details of the chemical composition, mechanical properties and density are to be submitted for approval.

### 3.4 Design

#### 3.4.1 Minimum blade thickness

- 3.4.1.1 Where the propeller blades are of conventional design, the thickness, t, of the propeller blades at 25 percent radius for solid propellers, at 35 percent for controllable pitch propellers, neglecting any increase due to fillets is to be not less than:-

- a) For fixed propeller

$$t_{0.2} = 1003 \sqrt{\frac{A}{C_n C} + \frac{0.0 B}{C n}} (m)$$

- b) For controllable pitch propellers

$$t_{0.2} = 805 \sqrt{\frac{A}{C_R C} + \frac{0.0 B}{C n}} (m)$$

Where,

$t_{0.25}$  = minimum blade thickness required at 25 percent radius;

$t_{0.35}$  = minimum blade thickness required at 35 percent radius;

$C_n$  = Section modulus coefficient at 25 percent radius or 35 percent radius as applicable;

$$= \frac{l_0}{U_f L^2} \text{ and is not to be taken greater than } 0.10;$$

$I_0$  = Moment of inertia of the expanded cylindrical section at 25 percent radius or 35 percent radius, as applicable about a straight line passing through the center of gravity parallel to the pitch line or to the nose-tail line, in (mm<sup>4</sup>);

$U_f$  = maximum normal distance from the moment of inertia axis to points on the face boundary (tension side) of the section at 25 percent radius or 35 percent radius, as applicable (mm);

$L$  = Length of the blade section of the expanded cylindrical section at 25 percent radius or 35 percent radius, as applicable, (mm);

$T$  = Maximum thickness of the expanded cylindrical section at 25 percent radius or 35 percent radius, as applicable, (mm);

$C_2$  = Section area sufficient at 25 percent radius or 35 percent radius as applicable;  
 $= \frac{a_2}{L}$

$a_s$  = area of the expanded cylindrical section at 25 percent radius or 35 percent radius, as applicable (mm<sup>2</sup>);

$f$  = material constant as per Table 3.4.1;

$w$  = material constant as per Table 3.4.1;

a) For fixed-pitch propellers

$$A = 1.0 + \frac{6.0 D}{P_{0.7}} + \frac{4.3 P_{0.2}}{D}$$

$$B = \left( \frac{4}{N} \frac{w}{N} \right) \left( \frac{R}{1} \right)^2 \left( \frac{D}{2} \right)^3$$

$$C = \left( 1 + \frac{1.5 P_{0.2}}{D} \right) (L_{0.2} f - B)$$

b) For controllable pitch propellers

$$A = 1.0 + \frac{6.0 D}{P_{0.7}} + \frac{3.0 P_{0.3}}{D}$$

$$B = \left( \frac{4}{N} \frac{w}{N} \right) \left( \frac{R}{1} \right)^2 \left( \frac{D}{2} \right)^3$$

$$C = \left( 1 + \frac{1.5 P_{0.3}}{D} \right) (L_0 f - B)$$

3.4.1.2 Propellers of unusual design or application will be subject to special consideration upon submittal of detailed stress calculations.

3.4.1.3 Fillets at the root of the blades are not to be considered in the determination of blade thickness.

| <b>Table 3.4.1 : Material constants</b>  |  |          |          |
|--|--|----------|----------|
| <b>Material</b>  | <b>Specified min.<br/>UTS (N/mm<sup>2</sup>)</b> | <b>f</b> | <b>W</b> |
| Manganese bronze Grade Cu 1  | 440  | 22.6     | 8.3      |
| Ni-Manganese bronze Grade Cu 2   | 440  | 22.9     | 8.0      |
| Ni-Aluminum bronze Grade Cu 3  | 590  | 22.7     | 7.5      |
| Min-Aluminum bronze Grade Cu 4   | 630  | 25.6     | 7.5      |
| Cast Iron  | 250  | 11.77    | 7.2      |
| Carbon and low alloy Steels  | 400  | 14.0     | 7.9      |
| Note:- The value of f may be increased by 10 percent for twin screw and outboard propellers of triple screw vessels. |  |          |          |

### 3.4.2 Key less propellers

3.4.2.1 Where propellers are fitted without keys, detailed stress calculations and fitting instructions are to be submitted for approval.

### 3.4.3 Controllable pitch propellers

3.4.3.1 In the case of controllable – pitch propellers, means are to be provided to lock the blades in ahead position in case of the failure of the pitch operating mechanism.

3.4.3.2 A propeller pitch indicator is to be fitted at each station from which it is possible to control the pitch of the propeller.

## 3.5 Fitting of propellers

3.5.1 The propeller boss is to be a good fit on the tail shaft cone. The forward edge of the bore of the propeller boss is to be rounded to about 6 (mm) radius.

3.5.2 The exposed part of the tail shaft is to be protected from action of water by filling all spaces between propeller hub, cap and shaft with suitable filling material. The propeller assembly is to be sealed at the forward end with a well-fitted soft rudder packing ring. When the rubber ring is fitted in an external gland, the hub counter bore

is to be filled with suitable material, and clearances between shaft liner and hub counter bore are to be kept to a minimum.

When the rubber ring is fitted internally, ample clearance is to be provided between the liner and hub and the ring is to be sufficiently sized to squeeze in to the clearance space when the propeller is driven up on the shaft and, where necessary, a filler piece is to be fitted in the propeller – hub keyway to provide a flat unbroken seating for the ring. The recess formed at the small end of the taper by the overhanging propeller hub is to be packed with red lead putty or rust-preventing compound before the propeller nut is put on.

- 3.5.3 Effective means are to be provided to prevent the slackening of the propeller nut.

## **Section 4**

### **Vibrations and Alignment**

#### **4.1 Scope**

- 4.1.1 The requirements of the section are applicable to main propulsion system with power exceeding 200 (kW).
- 4.1.2 Unless otherwise advised, it is the responsibility of the vessel builder as the main contractor to ensure, in co-operation with the engine builders, that the information required by this section is prepared and submitted.

#### **4.2 Basic system requirements**

- 4.2.1 The systems are to be free from excessive torsional, axial and lateral vibrations, and are to be aligned in accordance with tolerances agreed with the respective manufacturers.
- 4.2.2 Where changes are subsequently made to a dynamic system which has been approved, revised calculations are to be submitted for consideration.

#### **4.3 Resilient mountings**

- 4.3.1 Where the machinery is installed on resilient mountings, liner vibrations (steady state and transient) is not to exceed the limiting values agreed with the manufacturers of the machinery nor those of the resilient mountings.
- 4.3.2 Misalignment arising from such vibration is not to impose excessive loading on machinery components within the system.

**4.4 Torsional vibration**

- 4.4.1 Torsional vibration calculations, including an analysis of the vibration torques and stresses for the dynamic systems formed by the oil engines, turbines, motors, generators, flexible couplings, gears, shafting and propellers, where applicable, including all branches, are to be submitted for approval together with the associated plans.
- 4.4.2 Particulars of the division of power developed throughout the speed range for turbines, or from all intended combinations of operation in oil engine installations having more than one engine and / or with power take-off systems are to be submitted.
- 4.4.3 Any special speed requirements for prolonged periods in service are to be indicated, e.g., range of trawling revolutions per minute, range of operation revolutions per minute with a controllable pitch propeller, idling speed, etc.
- 4.4.4 The calculation and / or measurements carried out on oil engine installations containing transmission items sensitive to vibratory torque, e.g. gearing, flexible couplings, or generator rotors and their drives are to take into account the effects of engine malfunction commonly experienced in service, such as cylinder (s) not firing.
- 4.4.5 Restricted speed ranges will be imposed in regions of speed where stresses are considered to be excessive for continuous running. Similar restrictions will be imposed, or other protective measures required to be taken, where vibratory torques are considered to be excessive for particular machinery items.
- 4.4.6 Where calculations indicate the possibility of excessive torsional vibration within the range of working speeds, torsional vibration measurements, using the appropriate recognized techniques, may be required to be taken from the machinery installation for the purpose of determining the need for restricted speed ranges.

**4.5 Axial vibrations**

- 4.5.1 For all main propulsion shafting systems, the ship builder are to ensure that amplitudes due to axial vibrations are satisfactory throughout the speed range, so far as practicable. Where appropriate, amplitudes may be reduced by the use of suitable vibrations dampers or phasing or propeller and engine, etc.
- 4.5.2 Unless previous experience of similar installation shows it to be unnecessary, calculations of the shafting systems are to be carried out. These calculations are to include the effect of the thrust block seating and the surrounding hull structure taking

part in the vibration. The result of these calculations or the evidence of previous experience is to be submitted for consideration.

- 4.5.3 Where calculations indicate the possibility of excessive axial vibration amplitudes within the range of working speeds, measurements using an appropriate recognized technique may be required to be taken from the shafting systems for the purpose of determining the need for restricted speed ranges.

#### **4.6 Lateral vibrations**

- 4.6.1 For all main propulsion shafting systems the ship builders are to ensure that amplitudes due to lateral vibrations are satisfactory throughout the speed range.
- 4.6.2 Unless previous experience of similar installations shows it to be unnecessary, calculations of lateral, or bending, vibration characteristics of the shafting system are to be carried out. These calculations, taking account of dynamic bearing stiffness, are to cover the frequencies giving rise to all critical speeds which may result in significant amplitudes within the speed range, and are to indicate relative deflections and bending moments throughout the shafting system.
- 4.6.3 The result of these calculations, or the evidence of previous experience, is to be submitted for consideration.
- 4.6.4 Where calculation indicate the possibility of excessive lateral vibration amplitudes within the range of working speeds, measurements using an appropriate recognized technique may be required to be taken from the shafting system for the purpose of determining the need for restricted speed ranges.

#### **4.7 Shaft alignment**

- 4.7.1 For main propulsion installations, the shafting is to be aligned to give acceptable bearing reactions, and bending moments at all conditions of vessel loading and operation. The ship builder is to position the bearings and construct the bearing seating to minimize the effects of movements under all operating conditions.
- 4.7.2 For geared installations, where two or more pinions are driving the final reduction wheel, calculations are to be submitted to verify that shaft alignment is such that proper bearing reactions are maintained under all operating conditions.
- 4.7.3 Shaft alignment is to be verified by measurement.

**End of Chapter**

**Chapter 5**  
**Boilers and Pressure Vessels**  
**Contents**

**Section**

1 General

**Section 1**

**General**

**1.1 Scope**

1.1.1 The requirements of this Chapter are applicable to pressure vessels of seam less and fusion welded construction and their mounting sand fittings, for the following uses:-

- a) Fired boilers;
- b) Exhaust gas heated boilers;
- c) Economizers, super heaters, re-heaters and steam receivers for, and associated with (a) to (b).
- d) Steam heated steam generators,
- e) Other pressure vessels, not included in (a) to (d)

1.1.2 Consideration will be given to arrangements or details of boilers, pressure vessels and equipment which can be shown to comply with other recognized standards, provided they are not less effective.

**1.2 Design pressure**

1.2.1 The design pressure is the maximum permissible working pressure and is to be not less than the highest set pressure of any safety valve.

1.2.2 The calculations made to determine the scantlings of the pressure parts are to be based on the design pressure, adjusted where necessary to take account of pressure variations corresponding to the most severe operational conditions.

1.2.3 It is desirable that there should be a margin between the normal pressure at which the boiler or pressure vessel operates and the lowest pressure at which any safety valve is set to lift, to prevent unnecessary lifting of the safety valve.

**1.3 Metal temperature**

1.3.1 The metal temperature, T, used to evaluate the allowable stress is to be taken as the actual metal temperature expected under operating conditions for the pressure part



concerned and is to be stated by the manufacturer when plans of the pressure parts are submitted for consideration.

1.3.2 For boilers, the design metal temperature is not to be taken less than the following values, unless justified by an exact calculation of the temperature drop and is in no case to be taken less than 250° C:-

- a) For steam heated steam generators, secondary drums of double evaporation boilers, steam receivers and pressure part of fired pressure vessels not heated by hot gases and adequately protected by insulation, the metal temperature, T is to be taken as the maximum temperature of the internal fluid;
- b) For pressure parts heated by hot gases, T is to be taken as not less than 25° C in excess of the maximum temperature of the internal fluid;
- c) For combustion chambers of the type used in horizontal wet-back boilers, T is to be taken as not less than 50° C in excess of the maximum temperature of the internal fluid;
- d) For furnaces, fire boxes, rear-tube plates of dry-back boilers and pressure parts subject to similar rates of heat transfer, T is to be taken as not less than 90° C in excess of the maximum temperature of the internal fluid;
- d) For boiler, super-heater, re-heater and economizer tubes, the design temperature is to be taken as under:-
  - For boiler tubes the design temperature is to be taken as not less than saturated steam temperature plus 25° C for tubes mainly subject to convention heat, or plus 50° C for tubes mainly subjected to radiant heat;
  - For super-heater and re-heater tubes, the design temperature is to be taken as not less than steam temperature expected in the part being considered, plus 35° C for tubes mainly subject to radiant heat the design temperature is to be taken as not less than the steam temperature excepted in the part being considered, plus 50° C, but the actual metal temperature is to be stated when submitting plans;
  - The design temperature for economizer tubes is to be taken as not less than 35° C in excess of the maximum temperature of the internal fluid.

1.3.3 In general any parts of drums or headers not protected by tubes and exposed to radiation from fire or to the impact of hot gases is to be protected by a shield of good refractory material or by other approved means.

- 1.3.4 Drums and headers of thickness greater than 30 (mm) are not to be exposed to combustion gases having an anticipated temperature in excess of 650° C unless they are efficiently cooled by closed arranged tubes.

#### **1.4 Plans and particulars**

- 1.4.1 The following plans, in triplicate, for boiler and pressure vessels are to be submitted for approval, in so far as applicable:-

- a) General arrangement, including arrangement of valves and fittings;
- b) Sectional assembly;
- c) Seating arrangements;
- d) Steam, water drum and header details;
- e) Water wall details;
- f) Steam and super heater tubing, including the tube support arrangements;
- g) Economizer details;
- h) Casing arrangements;
- i) Reheat section;
- j) Fuel oil burning arrangement;
- k) Forced draft system;
- l) Boiler mountings including steam stop valves, safety valves and their relieving capacities, feed water connections, below-off arrangements water gauges, test cocks, etc.

- 1.4.2 The plans are to include the following particulars, in so far as applicable:-

- a) Scantlings;
- b) Materials;
- c) Weld details;
- d) Design pressures and temperatures;
- e) Heating surface areas of boilers and super-heaters;
- f) Estimated pressure drop through super heater;
- g) Estimated evaporation rate;
- h) Proposed setting pressure of safety valves on steam drum and super heater;
- i) Pressure-vessel class;
- j) Details of heat treatment and testing of welds;
- k) Calculations of thickness, when required;
- l) Test pressures.

## 1.5 Classification of pressure vessels

1.5.1 For rule purposes, boilers and pressure vessels are graded as shown in Table 1.5.1.

1.5.2 Pressure vessels which are constructed in accordance with the requirements of Class 2 or Class 3 will, if manufactured in accordance with the requirements of a superior class, be approved with the scantlings appropriate to that class.

| Table 1.5.1 : Grading to pressure vessels  |              |  |  |
|--|--------------|--|--|
|  | Boilers      | Steam-heated steam generators              | Other pressure vessels   |
| Class 1  | $p > 3.5$    | $D_1 > \left(\frac{15}{p} - 1\right) 1000$ | $P > 50$ or $t > 38$   |
| Class 2  | $p \leq 3.5$ | $D_1 > \left(\frac{15}{p} - 1\right) 1000$ | $P \leq 50$ or $D_1 > \left(\frac{2}{p} - 1\right) 1000$ $16 < t \leq 38$ or material temperature $> 150^\circ \text{C}$ |
| Class 3  |              |  | $D_1 < \left(\frac{2}{p} - 1\right) 1000$ and $t \leq 16$ and material temperature $\leq 150^\circ \text{C}$             |
| Notes:-  |              |  |  |
| $P$ = design pressure in bar $D_1$ = internal diameter (mm) $t$ = shell thickness (mm) |              |  |  |

1.5.3 In special circumstances relating to service conditions, materials, operating temperature, carriage of dangerous gases and liquids, etc. it may be required that certain pressure vessels be manufactured in accordance with the requirements of a superior class.

## 1.6 Materials

1.6.1 Materials used in the construction of boilers and pressure vessels are to be manufactured in accordance with the requirement of Pt. 2 Inspection and Testing of Materials of Rules & Rules for the Construction and Classification of Steel Vessels.

1.6.2 The specified minimum tensile strength of carbon and carbon manganese steel plates, pipes, forgings and castings is to be within the following general limits:-

- For seamless and Class 1 and Class 2 fusion welded pressure vessels – 340 – 520 (N/mm<sup>2</sup>);
- For boiler furnaces, combustion chambers and flanged plates – 400 – 520 (N/mm<sup>2</sup>)

- 1.6.3 The specified minimum tensile strength of low alloy steel plates, pipes, forgings and castings is to be within the general limits of 400-500 (N/mm<sup>2</sup>) and pressure vessels made in these steels are to be either seamless or Class 1 fusion welded.
- 1.6.4 The specified minimum tensile strength of boiler and super-heater tubes is to be within the following general limits;
- a) Carbon and carbon-manganese steels – 320 – 460 (N/mm<sup>2</sup>)
  - b) Low alloy steels – 400 – 500 (N/mm<sup>2</sup>)
- 1.6.5 Where it is proposed to use materials other than those specified in Pt.2, Inspection and Testing of Materials of Rules & Rules for the Construction and Classification of Steel Vessel, details of the chemical compositions heat treatment and mechanical properties are to be submitted for approval. In such cases the values of the mechanical properties used for deriving the allowable stress are to subject to agreement by classification society.
- 1.6.6 Where a fusion welded pressure vessel is to be made of alloy steel and approval of the scantlings is required on the basis of the high temperature properties of the material, particulars of the welding consumables to be used, including typical mechanical properties and chemical composition of the deposited weld metal are to be submitted for approval.

## **1.7 Pressure parts of irregular shape**

- 1.7.1 Where pressure parts are of such irregular shape that it is impracticable to design their scantlings by the application of formulae given in this Chapter, the suitability of their construction is to be determined by hydraulic proof test of a prototype or by an agreed alternative method.

## **1.8 Adverse working conditions**

- 1.8.1 Where working conditions are adverse, special consideration may be required to be given to increase the scantlings derived from formulae, e.g. by increasing the corrosion or other allowance at present shown in the formulae, or by adopting a design pressure higher than defined in 1.2, to offset the possible reduction of life in service caused by the adverse conditions. In this connection, where necessary, account should also be taken of any excess of loading resulting from:-
- a) Impact loads, including rapidly fluctuating pressures;
  - b) Weight of the vessel and normal contents under operating and test conditions;
  - c) Super imposed loads such as other pressure vessels, operating equipment's, insulation, corrosion resistant or erosion resistant linings and piping;

d) Reaction of supporting lugs, rings, saddles or other types of supports;

or

e) The effect of temperature gradients on maximum stress.

### **1.9 Design**

1.9.1 The boilers and pressure vessels are to be designed in accordance with the requirements of Ch.5, Pt.4 Main and Auxiliary Machinery, of Rules & Rules for the Construction and Classification of Steel Vessels.

### **1.10 Manufacture**

1.10.1 The manufacture of boilers and pressure vessels is to be carried out in accordance with the requirements of Ch.10, Pt. 4 Main and Auxiliary Machinery of Rules & Rules for the Construction and Classification of Steel Vessels.

**End of Chapter**

## **Chapter 6**

### **Steering Gears**

#### **Contents**

#### **Section**

- 1 General
- 2 Design Criteria

#### **Section 1**

##### **General**

#### **1.1 General**

- 1.1.1 All vessels are to be provided with reliable steering systems which would allow the vessel to be steered safely having regard to the use and principal dimensions of the vessel. This requirement does not apply to vessels intended to be pushed only. Proposals to fit a hand tiller only will receive special consideration.
- 1.1.2 For vessels not fitted with rudder but equipped with steering propellers / nozzles or voith- schneider propellers, see 2.5. For vessels fitted with rudders, a steering gear is to be provided.
- 1.1.3 The steering gear is to be secured to the seating by fitted bolts, and suitable chocking arrangements are to be provided. The seating is to be of substantial construction.
- 1.1.4 The steering gear is to be so designed that the rudder cannot change position when not intended to do so.
- 1.1.5 Steering gears may be manually operated (steering chains and rods or hand / hydraulic) or fully powered (electric or electric / hydraulic). However, when the rule diameter of the rudder stock exceeds 150 (mm) in way of tiller, a fully powered steering gear is to be provided.
- 1.1.6 Manually operated gears or power assisted gears are only acceptable when the operation does not required an effort exceeding 16 (kgf) under normal conditions.
- 1.1.7 If a fully powered steering gear is fitted an independent secondary means of steering is to be provided.
- 1.1.8 Requirements for chemical tankers, gas carriers and similar vessels will be specially considered.

## **Section 2**

### **Design Criteria**

#### **2.1 General**

- 2.1.1 The entire steering gear is to be designed, constructed and installed to allow for a permanent transverse list of up to 15 and for ambient temperature commensurate with the area in which the vessel is to operate.
- 2.1.2 The parts comprising the steering gear are to be so dimensioned that they can withstand all the maximum stresses to which they will be subjected in normal operating conditions. The steering gear is to be sufficiently strong so that in the event of rudder touching the bottom or bank, the maximum damage would be limited to deforming or fracturing of the rudder stock.
- 2.1.3 The steering gear is to be so designed that a rudder angle of not less than 35 on-either side can be obtained.
- 2.1.4 Where the steering gear is manually operated, on an average one complete turn of the hand wheel is to correspond to at least 3 of rudder angle.
- 2.1.5 Where the steering gear is fully powered, it is to be capable of turning the rudder at an average rate of 4 per second through the entire rudder arc when the rudder is fully immersed and with the vessel at full speed.
- 2.1.6 Where fully powered steering gear is provided with a second, manually operated gear the latter is to permit the vessel to proceed to a mooring at reduced speed.

#### **2.2 Fully powered steering gear**

- 2.2.1 Fully powered steering gears may be the direct electric or electric / hydraulic type.
- 2.2.2 Powered steering gears are to be fitted with means to limit the torque exerted by the drive.
- 2.2.3 In case of failure of the main drive and the secondary drive not engaging automatically, it is to be possible to engage the secondary drive by hand at the steering position within 5 seconds with the rudder in any position.
- 2.2.4. At the steering station, automatic indication is to be provided as to which drive is in operation.
- 2.2.5 If the independent secondary drive is manual the power drive is not to actuate the hand wheel. A device is to be fitted to prevent inadvertent turning of the hand wheel when the manual drive is engaged automatically.

- 2.2.6 Where the main steering gear is power hydraulically operated whilst the secondary steering is a manually operated hydraulic system, the piping of both systems is to be complete separate, and the main installation is to operate without using the steering wheel pump of the secondary installation.
- 2.2.7 Where both the main and secondary drive are power hydraulic, the respective pumps must be driven independently.
- 2.2.8 Where the secondary pump is driven by an engine which does not operate continuously whilst the vessel is in motion, means are to be provided to operate the steering gear instantly whilst the emergency engine is gaining the required speed.
- 2.2.9 The two installations are to have separate pipes, valves, controls, etc. Where the independent functioning of the two installations is ensured, they may have common components.

### **2.3 Manual drive**

- 2.3.1 Where the sole steering installation is a manually operated system, an independent secondary steering system is not required, provided that in the case of a hydraulic system, the dimensioning, construction and layout of the piping precludes deterioration through mechanical action or fire, and the construction of the steering wheel pump ensures faultless operation.

### **2.4 Rudder position**

- 2.4.1 If the position of the rudder (s) is not clearly perceivable from the steering station, a reliable rudder angle indicator is to be provided at the steering station.
- 2.4.2 Any rudder angle indicator fitted, is to function for both the main and secondary steering gear.

### **2.5 Rudder propellers and Voith Schneider requirement**

- 2.5.1 Where a steering propeller / nozzle or Voith Schneider propeller is fitted, two independent control systems are to be provided between the steering station and the propulsion installation.
- 2.5.2 Where two or more independent steering propulsion installation are fitted, a secondary independent control system is not required provided the vessel remains sufficiently maneuverable in the event of one of the installations failing.

### **2.6 Tillers, quadrants and connecting rods**

- 2.6.1 For the requirements regarding udder, rudder stock. See Pt. 3, Ch. 12.
- 2.6.2 All components transmitting mechanical forces to the rudder stock are to have strength of at least equivalent to the rudder stock in way of the tiller. The combined



resultant stress,  $\sigma_e$  caused by the transmission of rudder torque  $Q_r$ , in tillers, vanes and other power transmitting components is not to exceed  $138 \text{ (N/mm}^2\text{)}$ , i.e.

$$\sigma_e \sqrt{\sigma^2 + 3\tau^2} \leq 138 * \frac{N}{m} : +$$

Where,

$\sigma_e$  = The combined equivalent stress. (N/mm<sup>2</sup>)

$\sigma$  = The bending stress. (N/mm<sup>2</sup>)

$\tau$  = Torsional shear stress (N/mm<sup>2</sup>)

$Q_r$  = The rudder torque (N-m) calculated as per pt. 3 Ch. 12 Sec. 3.2:-

- 2.6.3 The section modulus 'Z' (cm<sup>3</sup>) and sectional area 'A' (cm<sup>2</sup>) of the tiller arms is not to be less than the following:-

$$Z = 0.012Q \left(1 - \frac{x}{R}\right) (cm^3)$$

$$A = 2.0 \frac{Q}{R} \times 10^{-4} (cm^2)$$

Where,

R = The distance (m) from the point of application of the effort on the tiller to the center of rudder stock; and

x = The distance (m) from the section under consideration to the center of the rudder stock.

- 2.6.4 The boss may be fitted on the rudder stock by shrinking with / without key or may be of the split type. The ratio between the mean of outer and inner diameters of the boss is to be not less than 1.75 and the height of the boss is not to be less than the inner diameter of the boss.
- 2.6.5 Co-efficient of friction for shrink fitting is not to be taken greater than 0.17 for dry fitting and 0.15 for oil injection fitting.
- 2.6.6 In case of split type boss, the total number of joining bolts is to be at least 4. The distance of the center of the bolts from the center of the rudder stock is generally to be  $1.15 d_u$  and the thickness of the coupling flange is to be at least 1.1 times the required bolt diameter. The thickness of shim to be fitted between two halves before machining is to be  $0.0015 d_u$ . The diameter of the coupling bolt  $d_b$  is to be not less than:-

$$d_b = \frac{d}{\sqrt{n}} (m)$$

Where,

$d_u$  = The rudder stock diameter in way of the tiller calculated in accordance with Pt.3, Ch.12, Sec. 3;

n = Total number of joining bolts.

2.6.7 The shear area of the key.  $A_s$ , is not to be less than:-

$$A_s = \frac{0.1 Q}{a} (c - 2)$$

Where,

dm = diameter of the conical part of the rudder stock at midway of key, (mm)

The keyway is to extend over the full depth of the tiller and have rounded edges. The abutting surface area of the key,  $A_b$ , (discounted rounded edges) between the key and the rudder stock or the key and the tiller boss is not to be less than:-

$$A_b \geq 0.5 A_s$$

2.6.8 Where higher tensile bolts are used on bolted tillers and quadrants, the yield and ultimate tensile stresses of the bolt material are to be stated on the plans submitted for approval, together with full details of the methods to be adopted to obtain the required setting-up stress. Where patent nuts or systems are used, the manufacturer's instructions for assembly should be adhered to.

2.6.9 In bow rudders having a vertical locking pin operated from the deck above, positive means are to be provided to ensure that the pin can be lowered only when the rudder is exactly central. In addition, an indicator is to be fitted at deck to show when the rudder is exactly central.

2.6.10 Steel-wire rope, chain and other mechanical systems, when these are used for rudder stock diameters of 120 (mm) and less but excluding allowance for strengthening in ice, will be specially considered. In general the breaking strength of rods / chains etc. is not to be less than:-

$$\text{Breaking strength} \geq 6 \frac{Q}{R} (N)$$

Where R is defined in 2.6.3.

## **2.7 Locking or break gear and springs**

2.7.1 An efficient locking or break arrangement is to be fitted to all gears to keep the rudder steady when necessary. In the case of hydraulic steering gears which are fitted with isolating valves on the body of the gear and duplicate power units, an additional mechanical brake need not be fitted.

2.7.2 In bow rudders having a vertical locking pin operated from the deck above, positive means are to be provided to ensure that the pin can be lowered only when the rudder is exactly central in addition, an indicator is to be fitted at the deck to show when the rudder is exactly central.

- 2.7.3 The steering gear, unless hydraulically powered, is to be protected by means of springs or buffers from damage by impact on the rudder.

**2.8 Rudder stops**

- 2.8.1 Suitable stopping arrangements are to be provided for the rudder. Cut-outs on the steering engine are to be arranged to operate at a similar angle of helm than those for the rudder.

**End of Chapter**

**Chapter 7**  
**Control Engineering Systems**  
**Contents**

**Section**

- 1 General Requirements
- 2 Essential Features for Control and Alarm Systems
- 3 Control and Supervision of Machinery

**Section 1**  
**General Requirements**

**1.1 General**

- 1.1.1 This chapter applies to all vessel and is in addition to other relevant chapters of the rules.
- 1.1.2 Attention should also be given to any relevant requirements of National, International or Local Authorities which would apply to the vessels in service.
- 1.1.3 This Chapter states requirements for systems of automatic or remote control which may be used for controlling the machinery contained in 1.2.2. The design and installation of other control equipment is to be such that there is no risk of danger due to failure.
- 1.1.4 The details of control systems will vary with the type of machinery being controlled and special consideration will be given to each case.

**1.2 Plans**

- 1.2.1 Where control systems are applied to essential machinery or equipment as listed in 1.2.2, plans are to be submitted in triplicate. They are to be included or to be accompanied by:-
  - Details of operating medium, i.e. pneumatic, hydraulic or electric, including stand by sources of power.
  - Description and / or block diagram showing method of operation.
  - Line diagrams of control circuits.
  - Lists of points monitored.
  - Lists of alarm points.
  - List of control points.

- Test facilities provided.
- Test schedules.

1.2.2 Control systems. Plans are required for the following:-

- Ballast systems.
- Bilge systems.
- Cargo pumping systems for tankers.
- Controllable pitch propellers.
- Electrical generating plant.
- Fire detection systems.
- Main propelling machinery including essential auxiliaries.
- Steam raising plant.
- Transverse thrust units.
- Steering gear plant.

1.2.3 Alarm systems. Details of the overall alarm system linking engine room, wheel house and, where applicable, accommodation spaces are to be submitted.

1.2.4 Control Station, Location – and details of control station are to be submitted, e.g. control panels.

1.2.5 Standard system. Where it is intended to employ a system which has been previously approved, plans may not be required to be submitted.

**1.3 Alarm and control equipment**

1.3.1 Major units of equipment associated with control, alarm and safety systems as defined in 1.2 are to be surveyed at the manufacturers' works and the inspection and testing is to be to the Surveyor's satisfaction.

1.3.2 Equipment used in control alarm systems should whenever practicable, be selected from the List of Type Approved Control and Electrical Equipment published by IRS. A copy of classification society (IRS) Test Requirements for the Type Approval of Control and Electrical Equipment will be furnished on application.

1.3.3 Assessment of performance parameters, such-as accuracy, repeatability and the like, are to be in accordance with an acceptable National or International Standard.

**1.4 Alterations or additions**

1.4.1 When an alteration or addition to the approved system (s) is proposed, plans are to be submitted for approval. The alternations, or additions are to be carried out under survey, and the inspection, testing and installation is to be to the Surveyor's satisfaction.

## **Section 2**

### **Essential Features for Control and Alarm Systems**

#### **2.1 General**

- 2.1.1 Where it is proposed to install control and alarm systems to the equipment defined in 1.2.2 the applicable features contained in 2.2 to 2.5 are to be incorporated in the system design.

#### **2.2 Control station(s) for machinery**

- 2.2.1 A system of alarm displays and controls are to be provided which readily ensure identification of faults in the machinery and satisfactory supervision of related equipment.

#### **2.3 Alarm systems**

- 2.3.1 Where an alarm system, which will provide warning of faults in the machinery and control systems is installed, the requirements of 2.3.1 to 2.3.10 are to be satisfied.
- 2.3.2 Machinery and control system faults are to be indicated at the relevant control station to advice duty personnel of a fault condition.
- 2.3.3 Individual alarm channels may be displayed as group alarms at the main control station (if fitted) or alternatively at subsidiary control stations.
- 2.3.4 All alarms are to be both audible and visual. If arrangements are made to silence audible alarms they are not to extinguish visual alarms.
- 2.3.5 If an alarm has been acknowledged and a second fault occurs before the first was rectified then audible and visual alarms are again tope rate.
- 2.3.6 Failure of the power supply to the alarm system is to be indicated.
- 2.3.7 The alarm system should be designed with self-monitoring properties. As far as practical, any fault in the alarm system should cause it to fail to the alarm condition.
- 2.3.8 The alarm system is to be designed as far as practical to function independently of control systems, such that a failure or malfunction in these systems will not prevent the alarm from operating.
- 2.3.9 Disconnection or manual over riding of any part of the alarm system should be clearly indicated.
- 2.3.10 The alarm system is to be capable of being tested.

#### **2.4 Control Systems**

- 2.4.1 Control systems for machinery operations are to best able throughout their operating range.

- 2.4.2 Failure of the power supply to a control system for propulsion machinery and associated systems is to be operate an audible and visual alarm.
- 2.4.3 When remote or automatic controls are provided, sufficient instrumentation is to be fitted at the relevant control stations to ensure effective control and indicate that the system is functioning correctly.
- 2.4.4 Where valves are operated by remote or automatic control, the system of control should include the following safety features:-
- a) Failure of actuator power should not permit a closed valve to opening advertently.
  - b) Positive indication is to be provided at the remote control station for the service to show the actual valve position or alternatively that the valve is fully opened or closed. Valve position indicating systems are to be of an approved type.
  - c) Equipment located in places which may be flooded should be capable of operating when submerged.
  - d) A secondary means of operating the valves, which may be local manual control is to be provided.

## **2.5 Fire detection alarms systems**

- 2.5.1 Where an automatic fire detection system is to be fitted in a machinery space the requirements of 2.5.2 to 2.5.9 are to be satisfied.
- 2.5.2 A fire detector indicator panel is to be located in such a position that a fire in the machinery spaces will not render it in operative.
- 2.5.3 The audible fire alarm is to have a characteristic tone which distinguishes it from any other alarm system. The audible fire alarm is to be audible on all parts of the bridge and in the accommodation areas.
- 2.5.4 The alarm system should, so far as practicable, be designed with self-monitoring properties.
- 2.5.5 Failure of power supply to the alarm system is to be indicated.
- 2.5.6 Detector heads of an approved type are to be located in the machinery spaces so that all potential fire out break points are guarded.
- 2.5.7 The fire detection system is to be capable of being tested.
- 2.5.8 It is to be demonstrated to the Surveyor's satisfaction that detector heads are so located that air currents will not render the system ineffective.
- 2.5.9 A drawing showing the location of the fire detector heads and the fire indicator panel, is to be submitted.

### Section 3

#### Control and Supervision of Machinery

##### 3.1 General

- 3.1.1 When machinery, as defined in 1.2.2, is fitted with automatic or remote controls so that under normal operating conditions it does not require any manual intervention by the operators then it is to be provided with the arrangements specified in 3.2 to 3.7. Alternative arrangements which provide equivalent safe guards will be considered.

##### 3.2 Oil engines for propulsion purposes

- 3.2.1 The following systems are to be provided with alarms:-

| System  | Alarm                       |
|---|-----------------------------|
| Lubricating oil pressure for the engine including gearing | Low                         |
| Lubricating oil pressure for the engine including         | Failure, see 3.2.2          |
| Cooling system (s) Temperature                            | High                        |
| Cooling system (s) Temperature                            | Excessively high, see 3.2.3 |

- 3.2.2 In the case of the lubricating oil system, in addition to the alarm indication as required by 3.2.1 at complete loss of lubricating oil the engine is to be stopped automatically or alternatively a second and separate alarm is to be provided giving audible and visible warning in the wheelhouse and in the engine room. The circuit and sensor employed for this automatic stop or alarm are to be additional to the alarm circuit and sensor required by 3.2.1
- 3.2.3 In the case of cooling system(s), in addition to the alarm indication as required by 3.2.1 a shutdown system for excessively high temperature may be fitted, which is to be independent of the alarm system.
- 3.2.4 Prolonged running in a restricted speed range is to be prevented automatically, alternatively, indication of restricted speed ranges is to be provided at each control station.

##### 3.3 Boilers

- 3.3.1 A system of water level detection is to be fitted which will operate alarms and shut off automatically the oil supply to the burners when the water level fall to a predetermined to level.



3.3.3 The oil fuel is to be shut off automatically from the burners, and alarms are to operate on flame failure and failure of combustion air supply detected by either low pressure at the fan-outlet or stopping of the fan motor.

3.3.3 Where the burner flame(s) is / are extinguished and reignited automatically in response to steam demand then after total flame failure re-ignition shall not take place until the furnace has been purged of explosive gases.

### 3.4 Auxiliary engines

3.4.1 The following systems for auxiliary engines of more than 37 kW (50 shp) are to be provided with alarms:-

| System  | Alarm  |
|---|--------|
| Lubricating oil pressure  | Low *  |
| Cooling system temperature  | High * |
| * These alarms may be combined with an automatic shutdown system, if fitted |        |

### 3.5 Remote control for propulsion machinery

3.5.1 The following systems are to be provided with alarms:-

| System  | Alarm          |
|---|----------------|
| Operating – medium for hydraulic or pneumatic coupling in propulsion system       | Low pressure   |
| Operating medium for hydraulic or pneumatic remote control system for main engine | Low pressure   |
| Electrical supply to remote control system for main engine                        | Loss of supply |

### 3.6 Controllable pitch propellers and transverse thrust units

3.6.1 Preferred alarm and safeguard are indicated in 3.6.2 to 3.6.4.

3.6.2 In the case of main propulsion systems, means are to be provided to prevent the engines and shafting being subjected to excessive torque due to changes in propeller pitch alternatively an engine overload indicator may be fitted at each station for which it is possible to control the pitch of the propeller.

3.6.3 Where transverse thrust units are remotely controlled, means are to be provided at the remote control station to stop the propulsion unit.

3.6.4 The following systems are to be provided with alarms:-

| System  | Alarm         |
|---|---------------|
| Hydraulic system pressure   | Low           |
| Power supply to the control system between the remote control station and hydraulic actuator. | Low of supply |

### 3.7 Steering gear

- 3.7.1 For power operated steering gear, safeguards and alarms are to be provided as indicated in 3.7.2 and 3.7.5.
- 3.7.2 Provision should be made at the bridge to ensure that the steering gear may be rapidly and effectively transferred to an alternative power and control system, which may be manual.
- 3.7.3 Where the alternative steering gear system is also power operated this system should be independent of the main power system.
- 3.7.4 The control system for the alternative steering gear system required by 3.7.2 is to be independent of the main steering gear control system.
- 3.7.5 The following systems are to be provided with alarms:-

| System                                 | Alarm   |
|--|---------|
| Steering gear power system (s)         | Failure |
| Steering gear control system (s)       | Failure |
| Steering gear hydraulic oil tank level | Low     |

### 3.8 Main propulsion shafting

- 3.8.1 Where a tank supplying lubricating oil to the stern bush is fitted, it is to be located above the load waterline and is to be provided with a low level alarm.

**End of Chapter**

**Chapter 8**  
**Spare Gear**  
**Contents**

**Section**

1 General

**Section 1**

**General**

**1.1 General**

- 1.1.1 Adequate spare parts for the propelling and essential auxiliary machinery together with necessary tools for maintenance and repair are to be readily available for use.
- 1.1.2 Spare parts are to be supplied and their location is to be the responsibility of the Owner but must take in to account the design and arrangements of the machinery and the intended service and operation of the vessel. Account should also be taken of the recommendations of the machinery manufacturer and any applicable statutory requirements of the country of registration of the vessel.

**1.2 Table of spare parts**

- 1.2.1 For guidance purposes spare parts for main and auxiliary machinery installations are shown in the following Tables:-
- Table 1.2.1 – Spare parts for main internal combustion engines;
  - Table 1.2.2 – Spare – parts for auxiliary boilers;
  - Table 1.2.3 – Spare parts for auxiliary air compressors.

| <b>Table 1.2.1 – Main internal combustion engines</b> |                   |  |             |
|---|-------------------|--|-------------|
| <b>Sr. No.</b>  | <b>Item</b>       | <b>Spare Part</b>  | <b>Qty.</b> |
| 1.  | Main thrust block | Pads for one face of thrust block  | 1 set       |
|   |                   | Complete white metal thrust shoe of solid ring type  | 1           |
|   |                   | Inner and outer race with rollers, where roller thrust bearings are fitted                 | 1           |
| 2   | Cylinder valves   | Exhaust valves, complete with casings, seats, springs, and other fittings for one cylinder | 1 set       |

|   |  |   |         |
|---|--|---|---------|
|   |  | Air inlet valves, complete with casings, seats springs and other fittings for one cylinder                      | 1 set   |
|   |  | Starting air valve, complete with casing, seat, springs and other fittings                                      | 1       |
|   |  | Relief valve, complete  | 1       |
|   |  | Fuel valves of each size and type fitted complete with all fittings, for one engine                             | 1/4 set |
| 3 |  | Special gaskets and packing of each size and type fitted for cylinder cover and cylinder liner for one cylinder | 1 set   |

**Table 1.2.2 – Auxiliary boilers**

| <b>Sr. No.</b> | <b>Item</b>            | <b>Spare Part</b>  | <b>Qty.</b> |
|----------------|------------------------|--|-------------|
| 1              | Tube stoppers or plugs | Tube stoppers or plugs, of each size used for boiler super heater and economizer tubes | 10          |
| 2              | Fire bars              | Fire bars for one boiler, where coal fired   | Half set    |
| 3              | Oil fuel burners       | Oil fuel burners complete, for one boiler  | 1 set       |

**Table 1.2.3 – Auxiliary air compressor**

| <b>Sr. No.</b> | <b>Item</b>  | <b>Spare Part</b>   | <b>Qty.</b> |
|----------------|--------------|---|-------------|
| 1              | Piston rings | Rings of each size fitted for one piston                    | 1 set       |
| 2              | Valves       | Suction and delivery valves, complete, of each size fitted. | Half set    |

**End of Chapter**

# **PART D**

## **ELECTRICAL**

### **INSTALLATIONS**

Electrical Installations requirements and any other related rules for vessels operating in Inland Waters to be applicable as per IRS and / or any IACS Classification Society Rules and / or IWAI model rules as applicable may be accepted for Inland Vessels.

## **Electrical Installations – Equipment's and Systems**

### **Contents**

#### **Section**

1. General Requirements
2. System Design
3. Switch board
4. Cables
5. Control Gear
6. Rotating Machines – Construction and Testing
7. Transformers – Construction and Testing
8. Miscellaneous Equipment
9. Trials

#### **Section 1**

##### **General Information**

##### **1.1 General**

- 1.1.1 The requirements of this Chapter apply to self-propelled and non-self-propelled vessels for service on inland waterways unless otherwise stated. Attention should also be given to any relevant applicable requirements of National or Local Authorities.
- 1.1.2 In passenger vessels, services essential for safety are to be maintained under emergency conditions and the safety of vessel and personnel from electrical hazards is to be assured.
- 1.1.3 Electrical installations are to be constructed and installed in accordance with the relevant sections of this Chapter and are to be inspected and tested-by the Surveyors. Compliance with the requirements of an acceptable National or International Standards may be accepted as meeting the requirements of this Chapter, subject-to inspection and testing by the Surveyors.
- 1.1.4 Classification society will be prepared to give consideration to special cases or to arrangements which are equivalent to the Rules. Consideration will also be given to the electrical arrangements of small vessels and vessels to be assigned class notation for a specified-limited service.

##### **1.2 Plans**

- 1.2.1 The plans and particulars in 1.2.2 to 1.2.4 are to be submitted in triplicate for approval.

- 1.2.2 Electrical Equipment:- The arrangement plan and circuit diagram of the switchboard(s). Diagrams of the wiring system including cable sizes, type of insulation, normal working current in the circuits and the capacity, type and make of protective devices. Calculations of short circuit currents at main bus bars and the secondary side of transformers are to be submitted.
- 1.2.3 Oil tankers, and similar vessels:- A general arrangement of the vessel showing hazardous zones or spaces and the location of electrical equipment in such zones or spaces. A schedule of safe type electrical equipment located in 'hazardous zones or spaces giving details of the type of equipment fitted, the Certifying Authority, the certificate number and copies of the certificate.
- 1.2.4 Centralized, remote or automatic controls:- See Ch. 7.

### **1.3 Additions or alterations**

- 1.3.1 Additions or alterations, (temporary or permanent) to the approved load of an existing installation are not to be made until it has been ascertained that the current carrying capacity and the condition of the existing accessories, conductors and switch gear are adequate for the proposed modification.
- 1.3.2 Plans for the proposed modifications are to be submitted for approval and the alternations or additions are to be carried out under the inspection, and to the satisfaction of the Surveyors.

### **1.4 Application**

- 1.4.1 Except where a specific statement is made to the contrary, all requirements of this Chapter are applicable to both alternating current and direct current installations.
- 1.4.2 Direct current equipment is to operate satisfactorily under voltage fluctuations of plus 6 percent and minus 10 percent.
- 1.4.3 Alternating current equipment is to operate satisfactorily under voltage fluctuations of plus 6 percent and minus 10 percent at rated frequency, and under fluctuations of  $\pm 5$  percent per at rated voltage.
- 1.4.4 Contactors and similar electromagnetic equipments are not to drop out at or above 85 percent rated voltage.
- 1.4.5 For D. C. installations supplied by batteries, consideration is to be given to the supply voltage variations between the battery's full charged and minimum charged voltages. For installations with float charging, the maximum charging voltage is also to be considered.

**1.5 Ambient reference conditions**

- 1.5.1 The rating of electrical equipment is to be suitable for the temperature conditions associated with geographical limits of the intended service. See also Ch.1.

**1.6 Location and construction**

- 1.6.1 Electrical equipment is to be placed in accessible and adequately lighted spaces clear of flammable material and heat sources. The spaces should be well ventilated, and the equipment should not be exposed to risk of mechanical injury or damage from water, excessive moisture, steam, oil or any other dangerous fluid. Where necessarily exposed to such hazards, the equipment is to be suitably – constructed or enclosed.
- 1.6.2 Live parts are to be efficiently shielded from any accidental contact.
- 1.6.3 All electrical apparatus and equipment is to be constructed and installed so as to avoid injury or electrical shock when handled or touched in the course of normal operation.
- 1.6.4 All nuts and bolts / screws used to connect or secure current – carrying parts and working parts are to be effectively locked, to prevent them from working loose during operation.

**1.7 Earthing**

- 1.7.1 All non-current-carrying exposed metal parts of electrical machines or equipment are to be effectively earthed.
- 1.7.2 All accessible non-current-carrying metal parts of portable electrical apparatus rated in excess of 55 volts are to be earthed through a suitable conductor unless equivalent safety provisions are made such as by double insulation or by an isolating transformer.
- 1.7.3 In general earthing connections are to be equal to the cross section of the current-carrying conductor up to 16 (mm<sup>2</sup>). Above this figure they are to be equal to at least half the cross section of the current carrying conductor, with a minimum of 16 (mm<sup>2</sup>). Earthing connections which are not made of copper are to have conductance not less than that specified for a copper earthing connection. These are to be securely installed and protected where necessary against mechanical damage and electrolytic corrosion. These are to be made in an accessible location and secured at both ends by corrosion resistant screws or clamps with cross section corresponding to the earth conductor. Such screw or clamps are not to be used for other purposes. Suitable washers and conductor terminals are to be used so that a reliable contact is ensured.
- 1.7.4 The metallic sheaths of cables other than the measuring circuits are to be earthed at their two ends.



**1.8 Creepage and clearance**

- 1.8.1 Distance between live parts and between live parts and earthed metal, whether across surface or in air, are to be adequate for the working voltages considering the nature of the insulating material and the transient over voltages developed by switch and fault conditions.

**1.9 Electrical equipment for use in explosive gas atmospheres**

- 1.9.1 Where the rules require electrical equipment to be a "safe type", such equipment is to be certified for the gas / vapor involved. The equipment should conform to IEC publication 79, "Electrical Apparatus for Explosive Gas Atmosphere" or an equivalent national standard.
- 1.9.2 Copies of type test certificate by a competent independent Testing Authority are to be made available.
- 1.9.3 When "safe type" equipment is permitted in hazardous zones or spaces all switches and protective devices are to interrupt all lines or phases and, where practicable, are to be located in a non-hazardous zone or space unless specially permitted otherwise. Appropriate labels of non-flammable material are to be permanently affixed to such equipment, switches and protective devices for identification purposes.

**Section 2****System Design****2.1 Design****2.1.1 Supply and distribution systems**

- 2.1.1.1 The following systems of generation and distribution are acceptable for parallel systems at constant voltage:-

- a) d. c. two wire insulated.
- b) a. c. single – phase two – wire insulated.
- c) a. c. three – phase, three – wire insulated.
- d) a. c. three – phase, four – wire with neutral earthed but without hull return.

- 2.1.1.2 System of generation and distribution, other than those specified above, will, upon application by given special consideration.

**2.1.2 Earth indication**

- 2.1.2.1 Every insulated distribution system is to be provided with lamps or other means to indicate the state of insulation from earth. Where lamp indicators are used, the lamps are to be of the metal filament type and their power is not to exceed 30 watts.

**2.1.3 Number and rating of generating sets**

2.1.3.1 The number and rating of service generating sets are to be adequate to ensure the operation of services essential for the propulsion and safety of the vessel.

2.1.3.2 On oil tankers and similar vessels, where electrical power is required for essential equipment, the generating plant and converting plant is to be of such capacity that this essential equipment can be operated satisfactorily even with one generating set or converting set out of action.

**2.1.4 The emergency source of power in passenger vessels**

2.1.4.1 All passenger vessels are to be provided with an, emergency source of electrical power. On vessels having a rule length of 25 (m) or more, the emergency source is to be situated outside the engine room and the space is to be constructed of water tight and fire resisting bulk heads and decks.

2.1.4.2 Where emergency generating sets are fitted they are to be capable of being started readily when cold.

2.1.4.3 If hand starting is demonstrated to be practicable, alternative means of starting are not required. Where hand starting is not practicable, other means are to be provided and, in general, should provide for at least 12 starts in a period of thirty minutes without recourse to sources within the machinery space.

2.1.4.4 The emergency source of power is to be either:-

- a) A generator driven by a suitable prime mover with an independent fuel supply and with satisfactory starting arrangements; the fuel used is to have a flash point of not less than 43° C or
- b) An accumulator (storage) battery capable of carrying the emergency load without recharging or excessive voltage drop.

2.1.4.5 An indicator is to be mounted in the machinery space, or in the wheel house, to indicate when any accumulator battery fitted in accordance with 2.1.4.4 is being discharged.

2.1.4.6 The emergency switchboard is to be installed as near as is practicable to the emergency source of power.

2.1.4.7 The emergency switchboard may be supplied from the main switch board during normal operation.

2.1.4.8 The power available is to be sufficient to supply all services necessary for the safety of passengers and crew in an emergency, due regard being paid to such services as may have to be operated simultaneously. Special consideration is to be given to

emergency lighting in all alleyways, stairways and exits, in the machinery spaces and in the control stations where radio, main navigating or central fire recording equipment or the emergency generator is located, to fire detection and alarm system, to the emergency fire pump if electrical driven, automatic sprinkler systems if fitted, and toe navigation lights. The power is to be adequate for a period of at least 3 hours.

### **2.1.5 Essential services**

2.1.5.1 Where essential services are duplicated, they are to be served by individual circuits separated throughout their length as widely as is practicable and without the use of common feeders, protective devices or control circuits.

### **2.1.6 Diversity factor**

2.1.6.1 Circuits supplying two or more final sub-circuits are to be rated, in accordance with the total connected load subject, where justified, to the application of a diversity factor. Where spare ways (feeders) are provided on a section or distribution board, an allowance for future increase of load is to be added to the total connected load before application of any diversity factor.

2.1.6.2 The diversity factor may be applied when calculating cable size and when calculating the rating of switch gear and fuse gear.

2.1.6.3 The diversity factors are not applicable to supply cables to distribution switch boards for lighting and heating.

### **2.1.7 Lighting circuits**

2.1.7.1 Lighting circuits are to be supplied by final sub-circuits, which are separate from those for heating and power. This provision need not be applied to cab in fan sands mall wardrobe heaters.

2.1.7.2 A final sub-circuit of rating exceeding 15 am per sis not to supply more than one point.

2.1.7.3 A final sub-circuit of rating 15 amperes or less is not to supply more than the following number of lighting points:-

10 for 24-55 V circuits

14 for 110-127 V circuits

18 for 220-250 V circuits

This provision is not applicable to final sub-circuits for cornice lighting, panel lighting and electric signs where lamp holders are closely grouped, in such cases, the number of points is unrestricted provided the maximum operating current in the sub-circuit does not exceed 10 amperes.

2.1.7.4 Lighting of unattended spaces, such as cargo spaces is to be controlled by multi-pole linked switches located outside such spaces. Provision is to be made for the complete isolation of these circuits and locking in the "OFF" position of the means of control.

2.7.5 Emergency lighting is to be fitted in accordance with 2.1.4

### **2.1.8 Motor circuits**

2.1.8.1 A separate final sub-circuit is to be provided for every motor required for essential services and for every motor 1 (kW) or more.

### **2.1.9 Motor control**

2.1.9.1 Every electric motor is to be provided with an efficient means of starting and stopping so placed as to be easily accessible to be person controlling the motor.

2.1.9.2 Every motor required for essential services and for every motor of 0.5 (kW) or more is to be provided with the control apparatus as mentioned in 2.1.9.4 to 2.1.9.8.

2.1.9.3 When motor control gear is being selected, the maximum current of the motor is to be taken as its rated full load current.

2.1.9.4 Efficient means of isolation are to be provided so that all voltage may be cut off from the motor and any associated apparatus including any automatic circuit breaker.

2.1.9.5 Where the primary means of isolation (viz. that provided at the switchboard, section board or distribution fuse board) is remote from a motor, one of the following provision is to be made:-

- a) An additional means of isolation fitted adjacent to the motor; or
- b) Provision made for locking the primary means of isolation in the OFF position; or
- c) Provision made so that the fuses in each line can be readily removed and retained by authorized personnel.

2.1.9.6 Means to prevent the undesired restarting after a stoppage due to low volts or complete loss of volts are to be provided. This does not apply to motors where a dangerous condition might result from the failure to restart automatically e.g. steering gear motor. It is, however, to be ensured that the total starting current of motors having automatic re-start will not cause excessive voltage drop or over current on the installation.

2.1.9.7 Means for automatic disconnection of the supply in the event of excessive current due to mechanical over loading of the motor are to be provided. This does not apply to steering gear motors).

2.1.9.8 Where fuses are installed to protect poly phase motor circuits, means are to be provided to protect the motor against unacceptable overload in the case of single phasing.

#### **2.1.10 Remote stops for ventilation fans and pumps**

2.1.10.1 Ventilation fans for machinery and cargo spaces are to be provided with means for stopping them from easily accessible control stations located outside such spaces.

2.1.10.2 Motors driving forced and induced draught fans, independently driven pumps delivering oil to main propulsion machinery, for bearing lubrication and piston cooling, oil fuel transfer pumps, oil fuel unit pumps and other similar fuel pumps, fuel and lubricating oil purifiers and their attached pumps are to be fitted with remote controls situated outside the space concerned so that the electrical supply thereto can be disconnected in the event of fire arising in the space in which they are located.

2.1.10.3 In passenger vessels all power ventilation systems; except cargo and machinery space ventilation, which is to be in accordance with 2.1.10.1, are to be fitted with master controls so that all fans may be stopped from either of two separate positions which are to be situated as far apart as practicable.

#### **2.1.11 Steering gear**

2.1.11.1 Where electrical control of the steering system is fitted, an independent alternative control system is to be installed. This may be a duplicate electrical control system or control by other means.

2.1.11.2 Provision is to be made on the bridge to transfer the steering control instantaneously to the alternative means of control.

2.1.11.3 Indicators for running indication of steering gear motors are to be installed on the bridge.

2.1.11.4 Audible and visual alarms are to operate at the steering positions for failure of steering gear power system and failure of steering gear control system.

#### **2.1.12 Fire detection, alarm and extinguishing system on passenger vessels.**

2.1.12.1 Where electrically driven emergency fire pumps are installed in accordance with Ch. 9 the supply of such pumps is not to pass through the main machinery space.

2.1.12.2 Any fire alarm system is to operate both audible and visual signals at the fire detection control station (s).

#### **2.1.13 Navigation lights**

2.1.13.1 Each navigation light is to be controlled and protected in each insulated pole by a switch and fuse or circuit breaker mounted in the distribution board.

2.1.13.2 Automatic indication of failure is to be provided unless the lights are visible from the bridge.

2.1.13.3 Any statutory requirements of the country of registration are to be complied with and may be accepted as an alternative to the above.

#### **2.1.14 Size of batteries and charging facilities**

2.1.14.1 Where batteries are used for starting main engines, they are to be of adequate capacity to meet the requirements of Ch. 4.

2.1.14.2 Adequate charging facilities are to be provided, and where batteries are charged from line voltage by means of a series resistor, protection against reversal of current is to be provided when the charging voltage is 20 percent of line voltage or higher. Means are also to be provided to isolate the batteries from the low voltage system when being charged from a higher voltage system.

#### **2.1.15 Heating and cooking equipment**

2.1.15.1 Every heating or cooking appliance is to be controlled as a complete unit by a multi-pole linked switch mounted in the vicinity of the appliance.

2.1.15.2 In the case of small heaters, for individual cabins or similar small dry accommodation spaces where the floor coverings, bulkheads and ceiling linings are of insulating materials, a single pole switch is acceptable.

2.1.15.3 Heating, arrangements of the exposed element type are not to be used in any location.

#### **2.1.16 Temporary external supply / shore connection**

2.1.16.1 Where arrangements are provided for the supply of electric power from a source on shore or elsewhere, a connection box is to be installed in an easily accessible location in a manner suitable for the convenient reception of flexible cables from the external source. This box should contain a circuit-breaker or isolating switch and fuses and terminals of ample size and suitable shape to facilitate a satisfactory connection. The mechanical stress of the portable cable is to be conveyed directly to the metallic framework and not to electrical connectors. Suitable cables, permanently fixed are to be provided, connected the circuit breaker / isolating switch in the connection box to a linked switch and / or circuit breaker at the main switch board.

2.1.16.2 For alternating current systems an earthed terminal is to be provided for the reception of three-phase external supplies with earthed neutrals.

2.1.16.3 The external connection is to be provided with an indicator at the main switchboard in order to show when the cable is energized.

2.1.16.4 Means are to be provided for checking the polarity (for direct current) or the phase sequence (for three-phase alternating current) of the incoming supply. This device should be connected between the incoming connectors and the interrupting device in the connection box.

2.1.16.5 A notice is to be provided at the connection box giving complete information on the system of supply and the normal voltage (and frequency for alternating current) of the vessel installed system. Full details of the procedure for effecting the connection are to be given on this notice.

2.1.16.6 Alternate arrangements for providing a temporary external supply will be specially considered.

## **2.2 Protection**

### **2.2.1 General**

2.2.1.1 Installations are to be protected against accidental over-currents including short circuits. The choice, location and characteristics of the protective device are to provide complete and coordinated protection to ensure:-

- a) Elimination of the fault to reduce damage to the system and hazard of fire.
- b) Continuity of service so as to maintain, through the discriminative action of the protective devices, the supply to circuits not directly affected by the fault.

### **2.2.2 Protection against overload**

2.2.2.1 Protection against overloads may be provided by circuit-breakers, automatic switches or fuses. The tripping characteristics of these devices are to be appropriate to the system. Fuses rated above 320 amperes are not to be used for protection against overload, but may be used for short-circuit protection.

### **2.2.3 Protection against short-circuit**

2.2.3.1 Protection against short-circuit currents is to be provided by circuit-breakers or fuses.

2.2.3.2 The breaking capacity of every protective device is to be not less than the maximum value of the short-circuit current which can flow at the point of installation at the instant of contact separation.

2.2.3.3 The making capacity of every circuit-breaker or switch intended to be capable of being closed, if necessary, on short circuit, is to be not less than the maximum value of the short-circuit current at the point of installation. On alternating current this maximum value corresponds to the peak value allowing for maximum asymmetry.

2.2.3.4 Every protective device or contactor not intended for short circuit interruption is to be adequate for the maximum short-circuit current which can occur at the point of installation having regard to the time required for the short circuit to be removed.

2.2.3.5 In the absence of precise data of rotating machine the following short-circuit current at the machines terminals are to be assumed. The short circuit is to be the sum of short circuit currents of generators and that of motors;

a) Direct current systems

Ten times full load current for generators normally connected (including spare).

Six times full load current for motors simultaneously in service;

b) Alternating current systems

Ten times full load current for generators normally connected (including spare) – symmetrical RMS.

Three times full load current for motors simultaneously in service.

## **2.2.4 Combined circuit-breakers and fuses**

2.2.4.1 The use of a circuit-breaker of breaking capacity less than the prospective short-circuit current at the point of installation is permitted, provided that it is preceded on the generator side by fuses, or by a circuit-breaker having at least the necessary breaking capacity. The generator breakers are not to be used for this purpose.

2.2.4.2 Fused circuit-breakers with fuses connected to the side may be used where operation of the circuit-breaker and fuses is coordinated.

2.2.4.3 The characteristics of the arrangement are to be such that:-

- a) When the short-circuit current is broken, the circuit-breaker on the load side is not to be damaged and is to be capable further service,
- b) When the circuit-breaker is closed on the short-circuit current, the remainder of the installation is not to be damaged. However, it is admissible that the circuit-breaker on the load side may require servicing after the fault has been cleared.

## **2.2.5 Protection of circuits**

2.2.5.1 Short circuit protection is to be provided in each live pole of direct current system and in each phase of an alternating current system.

2.2.5.2 Protection against overloads is to be provided as follows:-

- a) Two – wire direct current or single – phase alternating current system – at least one line or phase.
- b) Insulated three – phase alternating current system at least two phases.
- c) Earthed three – phase alternating current system – all three phases.



2.2.5.3 No fuse, non-linked switch or non-linked circuit – breaker is to be inserted in an earthed conductor. Any switch or circuit-breaker fitted is to operate simultaneously in the earthed conductor and the insulated conductors.

2.2.5.4 These requirements do not preclude the provision (for test purpose) of an isolated link to be used only when the other conductors are isolated.

### **2.2.6 Protection of generators**

2.2.6.1 In addition to over-current protection, the provisions of 2.2.6.2 to 2.2.6.7 are to be adhered to as a minimum.

2.2.6.2 For generators not arranged to run in parallel a multi-pole circuit – breaker arranged to open simultaneously all insulated poles or in the case of generators rated at less than 50 (kW) a multi-pole linked switch with a fuse in each insulated pole on the generator side is to be provided. The fuse rating in such cases is to be maximum 125 percent of the generator rated current.

2.2.6.3 For generators arranged to run in parallel a circuit – breaker arranged to open simultaneously all insulated poles is to be provided. This circuit – breaker is to be provided with:-

- a) For direct current generators, instantaneous reverse-current protection operating at not more than 15 percent rated current,
- b) For alternating current generators:-
  - i) A reverse – power protection with time delay selected and set within the limits of 2 percent to 15 percent of full load to a value fixed in accordance with characteristics of prime movers.
  - ii) Advice for protection against the effects of parallel connection in opposite phase.

2.2.6.4 The reverse-current protection is to be adequate to deal with the reverse-current conditions emanating from the network, e.g. from winches. The reverse-power protection specified for alternating current generator may be replaced by other devices ensuring adequate protection of the prime movers.

2.2.6.5 Generator circuit-breakers are normally to be provided with under voltage release.

### **2.2.7 Protection of feeder circuits**

2.2.7.1 Isolation and protection of each main distribution circuit is to be ensured by a multi-pole circuit-breaker or multi-pole switch and fuses. The provisions of 2.2.2, 2.2.3 and 2.2.5 are to be complied with. The protective devices are to allow excessive current to pass during the normal accelerating period of motors. Where multi-pole switch and

fuses are used, the fuses are generally to be installed between the bus bars and the switch.

2.2.7.2 Circuits which supply motors fitted with overload protection may be provided with short-circuit protection only.

2.2.7.3 Motors of rating exceeding 0.5 (kW) are to be protected individually against overload and short-circuit. The short-circuit protection can be provided by the same protective device for the motor and its supply cable. The overload protection may be replaced by an overload alarm, if desired by the Owner.

## **2.2.8 Protection of power transformers**

2.2.8.1 The primary circuits of power transformers are to be protected against short-circuit by circuit-breakers or fuses. The rating of fuses of the setting for over current releases of circuit breakers is not to exceed 125 percent of rated primary current. Switched and circuit-breakers are to be capable of withstanding surge currents.

2.2.8.2 When transformers are arranged to operate in parallel means are to be provided for isolation of the secondary circuits. Switches and circuit-breakers are to be capable of withstanding surge currents.

## **2.2.9 Protection of lighting circuits**

2.2.9.1 Lighting circuits are to be provided with overload and short-circuit protection.

## **2.2.10 Protection of meters, pilot lamps, capacitors and control circuits**

2.2.10.1 Protection is to be provided for voltmeters voltage coils of measuring instruments earth indicating devices and pilot lamps, together with their connecting leads by means of protective devices fitted to each insulated pole or phase.

2.2.10.2 A pilot lamp installed as an integral part of another item of equipment need not be individually protected provided it is fitted in the same enclosure. Where a fault in a pilot lamp would jeopardize the supply of essential equipment such as lamps are to be individually protected.

## **2.2.11 Protection of batteries**

2.2.11.1 Accumulator batteries other than engine starting batteries are to be protected against short circuit by devices in each insulated pole, placed in a position adjacent to the battery compartment.

## **2.2.12 Protection of communication circuits**

2.2.12.1 Communications circuits other than those supplied from primary batteries are to be protected against overload and short-circuit.

### Section 3

#### Cables

##### 3.1 General

- 3.1.1 Cables are to be in accordance with an acceptable National or International standard due regard being given to the ambient conditions stated in 1.5.

##### 3.2 Insulating materials

- 3.2.1 Permitted insulating materials with maximum rated conductor temperatures are given in Table 3.2.1.
- 3.2.2 The rated operating temperature of the insulating material is to be at least 10° C higher than the maximum ambient temperature liable to be produced in the space where the cable is installed.
- 3.2.3 Where a rubber or rubber like material with maximum conductor temperature greater than 60° C is used. It is to be readily identifiable.

##### 3.3 Sheaths and protective coverings

- 3.3.1 Cables are to be protected by one or more of the following and the material of the sheath or protective covering is to be compatible with the material of the insulation:-
- a) Sheath
    - Lead – alloy
    - Copper
    - Non – metallic
  - b) Protective covering
    - Steel – wire armor
    - Steel – tape armor
    - Metal – braid armor (Basket weave)
    - Fibrous braid
- 3.3.2 Unsheathed cables e.g. rubber insulated taped and braided or equivalent may be used only if installed in conduit.
- 3.3.3 Non – metallic sheath : Polychloroprene compound polyvinyl chloride compound and chlorosulphonated polyethylene may be used for impervious sheaths. Other compounds will be given due consideration.
- 3.3.4 Fibrous braid:- Textile braid is to be of cotton, hemp, asbestos, glass or other equivalent fiber, and is to be of strength for the size of the cable. It is to be effectively impregnated with a compound which is resistant to moisture and which is flame retarding.

| <b>Table 3.2.1:- Insulating materials</b>  |                                |
|--|--------------------------------|
| Insulating materials   | Max. Rated conductor temp. o C |
| <b>Elastomeric Compounds</b>   |                                |
| Natural or synthetic rubber (general purpose)  | 60                             |
| <b>Rubber</b>  |                                |
| Butyl rubber   | 80                             |
| Ethylene propylene rubber  | 85                             |
| Silicone rubber  | 95                             |
| <b>Thermoplastic Compounds</b>   |                                |
| Polyvinyl chloride (general purpose)   | 60                             |
| Polyvinyl chloride (heat resisting quality)  | 75                             |
| <b>Other Materials</b>   |                                |
| Minerals   | 95                             |
| <b>Notes:-</b><br>1. Silicon rubber and mineral insulation may be used for higher temperature (up to 150° C for silicone rubber and up to 250° C for mineral insulation) when installed where they are not liable to be touched by personnel. Proposals for such installations will be specially considered.<br>2. The temperature of the conductor is the combination of ambient temperature and temperature rise due to load.<br>3. Other insulating materials will be considered. |                                |

### 3.3.5 Cables fitted in the following locations:-

- Decks exposed to weather;
- Bathrooms;
- Cargo holds;
- Machinery spaces;

Or any other location where water condensation or harmful vapor (e.g. oil vapor) may be present are to have an impervious sheath. In permanently wet situations, metallic sheaths are to be used for cables with hygroscopic insulation.

### 3.3.6 All cables are to be of flame retardant type or fire-resisting type, except that not flame-retardant cables may be acceptable for final circuits only where cables are installed in metallic conduits having internal diameter not exceeding 25 (mm) and provided the conduits are electrically and mechanically continuous.

### 3.4 Voltage rating

- 3.4.1 The rated voltage of any cable is to be not lower than the nominal voltage of the circuit for which it is used.
- 3.4.2 The voltage drop from the main switchboard but bars to any point in the installation when the cables are carrying maximum current under normal conditions of service is not to exceed 6 percent of the nominal voltage.

### 3.5 Current rating

- 3.5.1. The highest continuous load carried by a cable is not to exceed its current rating. The diversity factor of the individual loads and the duration of the maximum demand may be allowed for in estimating the maximum continuous load and it to be shown on the plans submitted for approval.
- 3.5.2 In assessing the current rating of lighting circuits, every lamp holder is to be assessed at the maximum load likely to be connected to it, with a minimum of 60 W, unless the fitting is to be connected as to take only a lamp rated at less than 60 W.
- 3.5.3 Cable supply winches, cranes, windlasses and capstans are to be suitably rated for their duty. Unless the duty is such as to require a longer time rating, cable for winch or crane motors may be half hour rated on the basis of the half hour (kW) rating of the motors. Cables for windlass and capstan motors are to be not less than one hour rated on the basis of the one hour (kW) rating of the motor. In all cases the rating is to be subject to the voltages drop being within the specified limits.
- 3.5.4 The current ratings given in Table 3.5.1 to 3.5.5 are based on the maximum operating conductor temperatures given in Table 3.2.1. Alternatively current rating in accordance with an acceptable National or International Standard may be applied see 3.1.1.

**Table 3.5.1 : General purpose rubber and PVC insulation current rating (Based on ambient temp. 45° C)**

| <b>Nominal cross –<br/>section</b> | <b>Single core</b> | <b>2 core</b>  | <b>3 or 4 core</b> |
|------------------------------------|--------------------|----------------|--------------------|
| <b>(mm<sup>2</sup>)</b>            | <b>amperes</b>     | <b>amperes</b> | <b>amperes</b>     |
| 1                                  | 8                  | 7              | 6                  |
| 1.5                                | 12                 | 10             | 8                  |
| 2.5                                | 17                 | 14             | 12                 |
| 4                                  | 22                 | 19             | 15                 |

|     |                    |                    |                    |
|-----|--------------------|--------------------|--------------------|
| 6   | 29                 | 25                 | 20                 |
| 10  | 40                 | 34                 | 28                 |
| 16  | 54                 | 46                 | 38                 |
| 25  | 71                 | 60                 | 50                 |
| 35  | 87                 | 74                 | 61                 |
| 50  | 105                | 89                 | 74                 |
| 70  | 135                | 115                | 95                 |
| 95  | 165                | 140                | 116                |
| 120 | 190                | 162                | 133                |
| 150 | 220                | 187                | 154                |
| 185 | 250                | 213                | 175                |
| 240 | 290                | 247                | 203                |
| 300 | 335                | 285                | 235                |
|     | d.c.          a.c. | d.c.          a.c. | d.c.          a.c. |
| 400 | 390          380   | 332          323   | 273          266   |
| 500 | 450          430   | 383          365   | 315          301   |
| 630 | 520          470   | 442          400   | 364          329   |

### 3.6 Correction factors for current rating

3.6.1 Bunching of cables:- Where more than six cables belonging to the same circuit are bunched together a correction factor of 0.85 is to be applied.

**Table 3.5.2 : Heat resisting PVC insulation current rating (Based on ambient temp. 45° C)**

| <b>Nominal cross –<br/>section</b> | <b>Single core</b> | <b>2 core</b>  | <b>3 or 4 core</b> |
|------------------------------------|--------------------|----------------|--------------------|
| <b>(mm<sup>2</sup>)</b>            | <b>amperes</b>     | <b>amperes</b> | <b>amperes</b>     |
| 1                                  | 13                 | 7              | 6                  |
| 1.5                                | 17                 | 10             | 8                  |
| 2.5                                | 24                 | 14             | 12                 |
| 4                                  | 32                 | 19             | 15                 |
| 6                                  | 41                 | 25             | 20                 |
| 10                                 | 57                 | 34             | 28                 |

|     |                    |                    |                    |
|-----|--------------------|--------------------|--------------------|
| 16  | 76                 | 46                 | 38                 |
| 25  | 100                | 60                 | 50                 |
| 35  | 125                | 74                 | 61                 |
| 50  | 150                | 89                 | 74                 |
| 70  | 190                | 115                | 95                 |
| 95  | 230                | 140                | 116                |
| 120 | 270                | 162                | 133                |
| 150 | 310                | 187                | 154                |
| 185 | 350                | 213                | 175                |
| 240 | 415                | 247                | 203                |
| 300 | 475                | 285                | 235                |
|     | d.c.          a.c. | d.c.          a.c. | d.c.          a.c. |
| 400 | 570          560   | 485          475   | 400          390   |
| 500 | 650          620   | 550          530   | 455          435   |
| 630 | 740          670   | 630          570   | 520          470   |

**Table 3.5.3 : Butyl insulation current rating (Based on ambient temp. 45° C)**

| <b>Nominal cross –<br/>section</b> | <b>Single core</b> | <b>2 core</b>  | <b>3 or 4 core</b> |
|------------------------------------|--------------------|----------------|--------------------|
| <b>(mm<sup>2</sup>)</b>            | <b>amperes</b>     | <b>amperes</b> | <b>amperes</b>     |
| 1                                  | 15                 | 13             | 11                 |
| 1.5                                | 19                 | 16             | 13                 |
| 2.5                                | 26                 | 22             | 18                 |
| 4                                  | 35                 | 30             | 25                 |
| 6                                  | 45                 | 38             | 32                 |
| 10                                 | 63                 | 54             | 44                 |
| 16                                 | 84                 | 71             | 59                 |
| 25                                 | 110                | 94             | 77                 |
| 35                                 | 140                | 119            | 98                 |
| 50                                 | 165                | 140            | 116                |
| 70                                 | 215                | 183            | 151                |
| 95                                 | 260                | 221            | 182                |

|     |                    |                    |                    |
|-----|--------------------|--------------------|--------------------|
| 120 | 300                | 255                | 210                |
| 150 | 340                | 289                | 238                |
| 185 | 390                | 332                | 273                |
| 240 | 460                | 391                | 322                |
| 300 | 530                | 450                | 371                |
|     | d.c.          a.c. | d.c.          a.c. | d.c.          a.c. |
| 400 | 610          590   | 519          502   | 427          413   |
| 500 | 690          640   | 587          544   | 483          448   |
| 630 | 740          690   | 672          587   | 553          483   |

**Table 3.5.4 : Ethylene Propylene rubber, cross-linked polyethylene insulation current rating**

**(Based on ambient temp. 45° C)**

| <b>Nominal cross – section</b> | <b>Single core</b> | <b>2 core</b>  | <b>3 or 4 core</b> |
|--------------------------------|--------------------|----------------|--------------------|
| <b>(mm<sup>2</sup>)</b>        | <b>amperes</b>     | <b>amperes</b> | <b>amperes</b>     |
| 1                              | 15                 | 13             | 11                 |
| 1.5                            | 19                 | 16             | 13                 |
| 2.5                            | 26                 | 22             | 18                 |
| 4                              | 35                 | 30             | 25                 |
| 6                              | 45                 | 38             | 32                 |
| 10                             | 63                 | 54             | 44                 |
| 16                             | 84                 | 71             | 59                 |
| 25                             | 110                | 94             | 77                 |
| 35                             | 140                | 119            | 98                 |
| 50                             | 165                | 140            | 116                |
| 70                             | 215                | 183            | 151                |
| 95                             | 260                | 221            | 182                |
| 120                            | 300                | 255            | 210                |
| 150                            | 340                | 289            | 238                |
| 185                            | 390                | 332            | 273                |
| 240                            | 460                | 391            | 322                |



|     |           |           |           |
|-----|-----------|-----------|-----------|
| 300 | 530       | 450       | 371       |
|     | d.c. a.c. | d.c. a.c. | d.c. a.c. |
| 400 | 650 630   | 558 536   | 445 441   |
| 500 | 740 680   | 629 578   | 518 476   |
| 630 | 840 740   | 714 629   | 588 516   |

**Table 3.5.5 : Silicon rubber, mineral insulation current rating****(Based on ambient temp. 45° C)**

| <b>Nominal cross –<br/>section</b> | <b>Single core</b> | <b>2 core</b>  | <b>3 or 4 core</b> |
|------------------------------------|--------------------|----------------|--------------------|
| <b>(mm<sup>2</sup>)</b>            | <b>amperes</b>     | <b>amperes</b> | <b>amperes</b>     |
| 1                                  | 20                 | 17             | 14                 |
| 1.5                                | 24                 | 20             | 17                 |
| 2.5                                | 32                 | 27             | 22                 |
| 4                                  | 42                 | 36             | 29                 |
| 6                                  | 55                 | 47             | 39                 |
| 10                                 | 75                 | 64             | 53                 |
| 16                                 | 100                | 85             | 70                 |
| 25                                 | 135                | 115            | 95                 |
| 35                                 | 165                | 140            | 116                |
| 50                                 | 200                | 175            | 140                |
| 70                                 | 255                | 217            | 179                |
| 95                                 | 310                | 264            | 217                |
| 120                                | 360                | 306            | 252                |
| 150                                | 410                | 349            | 287                |
| 185                                | 470                | 400            | 329                |
| 240                                | 570                | 485            | 400                |
| 300                                | 660                | 560            | 460                |

**Table 3.6.1 : Correction factors for temperature**

| <b>Insulation</b>               | <b>25</b> | <b>30</b> | <b>35</b> | <b>40</b> | <b>45</b> | <b>50</b> | <b>55</b> |
|---------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Rubber of PVC (general purpose) | 1.53      | 1.41      | 1.29      | 1.15      | 1.00      | 0.82      | 0.85      |

|   |      |      |      |      |      |      |      |
|---|------|------|------|------|------|------|------|
| PVC (heat – resisting quality)                          | 1.29 | 1.22 | 1.15 | 1.08 | 1.00 | 0.91 | 0.82 |
| Butyl rubber  | 1.25 | 1.20 | 1.13 | 1.07 | 1.00 | 0.93 | 0.85 |
| Ethylene propylene rubber,<br>cross-linked polyethylene | 1.22 | 1.17 | 1.12 | 1.06 | 1.00 | 0.94 | 0.87 |
| Mineral, silicon rubbers                                | -    | -    | -    | 1.05 | 1.00 | 0.95 | 0.89 |

Notes:-

1. For cables in refrigerated chamber and holds and for vessels restricted to service in non-tropical waters, correction factors for 35° C may be acceptable.
2. Correction factors for intermediate values of the ambient temperature can be ascertained by interpolation.

**Table 3.6.2 : Correction factors for intermittent rating**

| Correction factor | Half – hour rating                      |  | One – hour rating                       |  |
|-------------------|---|--|---|--|
|                   | With metallic sheath (mm <sup>2</sup> ) | Without metallic sheath (mm <sup>2</sup> ) | With metallic sheath (mm <sup>2</sup> ) | Without metallic sheath (mm <sup>2</sup> ) |
| 1.00              | Upto 20                                 | Upto 75                                    | Upto 67                                 | Upto 230                                   |
| 1.10              | 21 – 40                                 | 76 – 125                                   | 68 – 170                                | 231 – 400                                  |
| 1.15              | 41 – 65                                 | 126 – 180                                  | 171 – 290                               | 401 – 600                                  |
| 1.20              | 66 – 95                                 | 181 – 250                                  | 291 – 430                               | -  |
| 1.25              | 96 – 120                                | 251 – 320                                  | 431 – 600                               | -  |
| 1.30              | 131 – 170                               | 321 – 400                                  | -                                       | -  |
| 1.35              | 171 – 220                               | 401 – 500                                  | -                                       | -  |
| 1.40              | 221 – 270                               | -  | -                                       | -  |

3.6.2 Ambient temperature:- The current ratings in Table 3.5.1 to 3.5.5 are based on an ambient temperature of 45° C. For other values of ambient temperature the correction factors shown in Table 3.6.1 are to be applied.

3.6.3 Intermittent service:- Where the load is intermittent, the correction factors in Table 3.6.2 may be applied for half hour and one hour ratings. In no case is a shorter rating than one half hour rating to be used, whatever the degree of intermittency.

### 3.7 Testing

3.7.1 Tests in accordance with an acceptable National or International Standards are to be made at the manufacturer's works prior to dispatch.

**3.8 Connections between entrained vessels**

- 3.8.1 Cables are to be suitable for used in the connections between entrained vessels i.e., are to be flexible, robust and of commensurate cross-section area.
- 3.8.2 The connection is to include provisions for the continuity of out-of-balance or earth-fault current return. The connecting device is to include provisions to ensure that this circuit closed before, and opened after, the live circuits.
- 3.8.3 Terminal plugs and sockets, if used are to be so arranged that any exposed pins cannot be energized.
- 3.8.4 Where hall-return system are used, hull polarity is to be compatible.

**3.9 Installation of cables**

- 3.9.1 Cables runs are to be, as far as practicable, straight and accessible and as high as possible above bilges.
- 3.9.2 Cables having insulating materials with different maximum-rated conductor temperatures are not to be bunched together, or, where this is not practicable, the cables are to be operated so that no cable reaches temperature higher than that permitted for the lowest temperature – rated cable in the group.
- 3.9.3 Cables having a protective covering which may damage the covering of other cables are not to be bunched with those other cables.
- 3.9.4 The minimum internal radius of bends of installed cables is to be generally in accordance with following:-

|                                 |  |
|---------------------------------|--|
| 4d                              | For cables without braiding, armoring or other metal sheath and with an overall diameter not exceeding 25 (mm) |
| 6d                              | For all other cables   |
| (d = overall diameter of cable) |  |

- 3.9.5 Cables, are to be effectively supported and secured in a manner that prevents damage to their coverings.
- 3.9.6 Supports and accessories are to be robust and are to be of corrosion-resistant material or suitably corrosion inhibited before erection.
- 3.9.7 The distance between supports, for horizontal as well as vertical runs of cables, is to be chosen according to the type / size of cable but generally in accordance with Table 3.9.1.

### 3.10 Mechanical protection of cables

3.10.1 Cables exposed to risk of mechanical damage are to be protected by metal channels or casing or enclosed in steel conduit unless the protective covering (e.g. armor or sheath) is adequate to withstand the possible damage.

| Table 3.9.1 : Distance between supports |               | Non-armored cables | Armored cables |
|---|---------------|--------------------|----------------|
| External diameter of cables             |               |                    |                |
| Exceeding                               | Not exceeding |                    |                |
| (mm)                                    | (mm)          | (mm)               | (mm)           |
| -                                       | 8             | 200                | 250            |
| 8                                       | 13            | 250                | 300            |
| 13                                      | 20            | 300                | 350            |
| 20                                      | 30            | 350                | 400            |

3.10.2 Cables, in spaces where there is exceptional risk of mechanical damage (e.g. on weather decks, in cargo hold areas and inside the cargo holds) and also below the floor in engine room, are to be suitably protected, even if armored unless the steel structure affords adequate protection.

3.10.3 Metal casings for mechanical protection of cables are to be efficiently protected against corrosion.

### 3.11 Earthing of metal coverings

3.11.1 Metal coverings of cables are to be effectively earthed at both ends of the cable except in final sub-circuits, where earthing at the supply end and only will be considered adequate. This does not necessarily apply to instrumentation cables where single point Earthing may be desirable to technical reasons.

3.11.2 The electrical continuity of all metal coverings of cables throughout the length of cable, particularly at joints and tapping, is to be ensured.

3.11.3 The lead sheath lead-sheathed cables it not to be used as sole means or earthing the non-current carrying parts of items of equipment.

### 3.12 Penetration of bulkheads and decks by cables

3.12.1 Penetration or watertight bulkheads or decks is to be carried out with either individual watertight glands or with packed watertight boxes carrying several cables. In either case, the watertight integrity and strength of the bulkheads and decks are to be maintained. Where cables with polyvinyl chloride insulation are being installed,

particular care is to be taken to avoid damage to the sheathing during the fitting of watertight bulkhead glands.

3.12.2 Where cables pass through non-watertight bulkheads or structural steel, the holes are to be bushed, in order to protect the cables, with lead or other approved material which will prevent damage to the cables by abrasion. If the steel is 6 (mm) thick, adequately rounded edges may be accepted as the equivalent of bushing.

3.12.3 Cables passing through decks are to be protected by deck tubes or ducts.

3.12.4 Materials used for glands and bushings are to be such that there is no risk of corrosion.

3.12.5 Where rectangular holes are cut in bulkheads or structural steel the corners are to be adequately rounded.

### **3.13 Installation of cables in pipes and conduits**

3.13.1 Installation of cables in pipes and conduits is to be carried out in such a manner that there is no damage to the cable covering.

3.13.2 Metal conduit systems are to be earthed and are to be mechanically and electrically continuous across joints. Individual short lengths of conduit need not be earthed.

3.13.3 The internal radius of bend of pipes and conduit is to be not less than that laid down for cables, provided that for pipes exceeding 64 (mm) diameter the internal radius of bend is not less than twice the diameter of the pipe.

3.13.4 The drawing is factor (ratio of the sum of the cross-sectional areas of the cables, based on their external diameter, to the internal cross-section area of the pipe) is not to exceed 0.4.

3.13.5 Expansion joints are to be provided where necessary.

3.13.6 Cable pipe and conduits are to be adequately and effectively protected against corrosion where necessary openings are to be provided at the highest and lowest points to permit air circulation and to prevent accumulation of water.

3.13.7 Where cables are laid in trunks and the trunks are to be so constructed as not to afford passage for fire from one deck or compartment to another.

3.13.8 Non-metallic ducting or conduit is to be of flame retardant material PVC conduit is not to be used in refrigerated spaces or on open decks, unless specially approved.

### **3.14 Cables for alternating current**

3.14.1 Generally, multi-core cables are to be used in A. C. installations. Where it is necessary to use single-core cables for alternating current circuits rated in excess of 20 amperes the requirements of 3.14.2 to 3.14.8 are to be complied with.

- 3.14.2 Cables are to be either non-armored or armored with non-magnetic material.
- 3.14.2 If installed in pipe or conduit cables belonging to the same circuit are to be installed in the same conduit, unless the conduit or pipe is of non-magnetic material.
- 3.14.3 Cable clips are to include cables of all phases of a circuit unless the clips are of non-magnetic material.
- 3.14.4 When installing two, three or four single – core cables forming respectively single – phase circuits, three – phase circuits or three – phase and neutral circuits, the cables are to be in contact with one another, as far as possible. In any case, the distance between the external covering of two adjacent cables is not to be greater than one diameter.
- 3.14.5 In the case of circuits using two or more parallel connected cables per phase, all cables are to have the same length and cross sectional area.
- 3.14.6 Where single core cables of rating exceeding 50 amperes are used, magnetic material is not to be placed between single – core cables of a group. If these cables pass through steel plates, all cables of the same circuit are to pass through the plate or gland so constructed that there is no magnetic material between the cables and suitable clearance is provided between the cable core and magnetic material. This clearance, wherever practicable, is not to be less than 75 (mm) when the current exceeds 300 amperes. For currents between 50 amperes and 300 amperes the clearance may be proportionately reduced.
- 3.14.7 If single – core cables of current rating greater than 250 amperes are run along a steel bulkhead, where practicable the cables should be spaced away from the steel.

### **3.15 Cable ends**

- 3.15.1 The ends of all conductors of cross-sectional area greater than 4 (mm<sup>2</sup>) are to be fitted with soldering sockets, compression type sockets or mechanical clamps. Corrosive fluxes are not to be used.
- 3.15.2 Cables having hygroscopic insulation (e.g. mineral insulated) are to have their ends sealed against ingress of moisture.
- 3.15.3 Cables with a supplementary insulating belt beneath the protective sheath are to have additional insulation at those points where the insulation of each core makes or may make contact with earthed metal.

### **3.16 Joints and branch circuits in cables systems**

- 3.16.1 Cable runs are normally not to include joints. However, if a joint is necessary it is to be carried so that all conductors are adequately secured, insulated and protected from atmospheric action. Terminals and bus bars are to be of dimensions adequate for the cable rating.

## **Section 4**

### **Switchboards**

#### **4.1 General**

- 4.1.1 Switchboards, section boards and distribution boards are to be constructed of, or enclosed with non-flammable, non-hygroscopic material and are to be so installed that live parts are sufficiently guarded and adequate space is provided for maintenance. Also they are to be protected where necessary in way of pipes etc.
- 4.1.2 All measuring instruments and all apparatus controlling circuits are to be clearly and indelibly labeled for identification purposes. An indelible label is to be permanently secured adjacent to every fuse and every circuit breaker and marked with particulars of the full load current of the generator, motor or cable which the fuse or circuit breaker protects. Where inverse time and / or reverse current devices are provided in connection with a circuit breaker, the appropriate settings of these devices are to be stated on the label. Name plates are to be of flame retardant material.

#### **4.2 Instruments**

- 4.2.1 Sufficient instrumentation is to be provided for measuring voltage, current, frequency and for alternating current generators above 50 (kW).
- 4.2.2 Where alternating current generators are required to operate in parallel, synchronizing arrangements are to be fitted.

#### **4.3 Instrument transformers**

- 4.3.1 The secondary windings of instrument transformers are to be earthed.

#### **4.4 Switchgear**

- 4.4.1 Circuit breakers and switches are to be of the air break type and are to be constructed in accordance with an acceptable National or International Standard.
- 4.4.2 Report of tests to establish the capacity of circuit-breakers are to be submitted for consideration when required.
- 4.4.3 Over current releases are to be calibrated in amperes and settings marked on the circuit breaker.

#### **4.5 Fuses**

- 4.5.1 Fuses are to comply with an acceptable National or International Standard.
- 4.5.2 Fuse links and fuse bases are to be marked with particulars of rated current and rated voltage. Each fuse position is to be permanently and indelibly labeled with the current

carrying capacity of the circuit protected by it and with the appropriate approved size of fuse or replaceable element.

#### **4.6 Testing**

- 4.6.1 Before installation, switchboards complete or in section with all components are to pass the following tests at the manufacturer's works and a certificate furnished. A high voltage test is to be carried out in all switching and control apparatus for systems greater than 60 V with a test voltage of 1000 V plus twice the rated voltage with a minimum of 2000 V at any frequency between 25 and 100 Hz for one minute applied between (a) all current – carrying parts connected together and earth and (b) between current carrying parts of opposite polarity or phases.
- 4.6.2 For systems of 60 V or less the test shall be at 500 V for one minute.
- 4.6.3 Instruments and ancillary apparatus may be disconnected during the high voltage test.
- 4.6.4 Immediately after the high voltage test the insulation resistance between (a) all current – carrying parts connected together and earth and (b) between current carrying, parts of opposite polarity or phase, shall not be less than 1 Megohm when tested with a direct current voltage of at least 500 V.
- 4.6.5 Functional tests. The correct functions of the installation components in line with the connections intended to be made have to be checked as far as possible.

### **Section 5**

#### **5.1 Control Gear**

- 5.1.1 Control gear is to comply with an acceptable National or International Standard, amended where necessary for ambient temperature.
- 5.1.2 Control gear, including isolating and reversing switches, is to be so arranged that shunt field circuits are not disconnected without adequate discharging path being provided.

#### **5.2 Testing**

- 5.2.1 Control gear and resistors are to be tested by the manufacturers with a high voltage applied between the earthed frame and all live parts and a certificate furnished by them to this effect. For operating voltages above 55 V, the test voltage is to be 1000 V plus twice the rated voltage with a minimum of 2000 V. The voltage is to be alternating at any frequency between 25 and 100 Hz and is to be maintained for one minute without failure.



- 5.2.2 Control gear and resistors operating at 55 V or below are to be tested to 500 V for one minute.
- 5.2.3 Immediately after the high voltage test, the insulation resistance between (a) all current – carrying parts connected together and earth, and (b) between current – carrying parts of opposite polarity or phase, is not to be less than 1 mega ohm when tested with a direct current voltage of at least 500 V.
- 5.2.4 Instruments and ancillary apparatus may be disconnected during the high voltage test.
- 5.2.5 Functional Test:- The correct functions of the installation components in line with the connections intended to be made, have to be checked as far as possible.

### **Controls**

#### **Rotating Machines Construction and testing**

##### **6.1 General**

- 6.1.1 Rotating machines are to be constructed in accordance with an acceptable National or International Standard, due regard being given to the ambient conditions stated in 1.5.

##### **6.2 Rating**

- 6.2.1 Vessels service generators including their exciters, and continuously rated motors are to be suitable for continuous duty at their full rated output at maximum cooling air or water temperature for an unlimited period, without the limits of temperature rise in 6.3 being exceeded. Other generators and motors are to be rated in accordance with the duty which they are to perform, and when tested under rated load conditions the temperature rise is not to exceed the values in 6.3. Alternatively limits of temperature rise in accordance with an acceptable National or International Standard may be applied.

##### **6.3 Temperature rise**

- 6.3.1 The limits of temperature rise specified in Table 6.3.1 are based on a cooling air temperature of 45° C and a cooling water temperature of 30° C.
- 6.3.2 If the temperature of the cooling medium is known to exceed the value given in 6.3.1 the permissible temperature rise is to be reduced by an amount equal to the excess temperature of the cooling medium.
- 6.3.3 If the temperature of the cooling medium is known to be permanently less than the value given in 6.3.1, the permissible temperature rise may be increased by an amount

equal to the difference between the declared temperature and that given in 6.3.1 up to a maximum of 15° C.

| <b>Table 6.3.1 : Limits of temperature rise in °C</b> |  |   |  |          |          |
|---|--|---|--|----------|----------|
| <b>Item</b>   | <b>Part of machine</b>   | <b>Method of measurement of temperature</b> | <b>Temperature rise in air-cooled machines °C</b>  |          |          |
|   |  |   | <b>Insulation Class</b>  |          |          |
|   |  |   | <b>A</b>   | <b>E</b> | <b>B</b> |
| 1 (a)   | a. c. winding  | R   | 50   | 65       | 70       |
|   |  | T   | 40   | 55       | 60       |
| (b)   | Field winding of a. c. and d. c. machines having d. c. excitation other than those in Item 2 and 3 | R   | 50   | 65       | 70       |
|   |  | T   | 40   | 55       | 60       |
| (c)   | Winding of armatures having commutators  | R   | 50   | 65       | 70       |
|   |  | T   | 40   | 55       | 60       |
| 2   | Field winding of turbine – type machines having d. c. excitation                                   | R   | -  | -        | 80       |
| 3 (a)   | Low – resistance field windings of more than one layer and compensating windings                   | T. R.                                       | 50   | 65       | 70       |
| (b)   | Single – layer windings with exposed bare surfaces   | T. R.                                       | 55   | 70       | 80       |
| 4   | Permanently short – circuited windings un-insulated  | T   | 50   | 65       | 70       |
| 5   | Permanently short – circuited windings un-insulated  | T   | The temperature risk of these parts shall in no case reach such a value that there is a risk of injury to any insulating or other material on adjacent parts |          |          |
| 6   | Iron core and other parts not in contact with windings   | -   | The temperature rise of these parts shall in no case reach such a value that there is a risk of injury to any  |          |          |

|   |  |   |  |    |    |
|---|--|---|--|----|----|
|   |  |   | insulating or other material on adjacent part. |    |    |
| 7 | Iron core and other parts in contact with windings | T | 50   | 65 | 70 |
| 8 | Commutators and slip – rings open or enclosed      | T | 50   | 60 | 70 |

Notes:-

1. T = Thermometer method  
R = Resistance method
2. When Class F or Class H insulation is employed the permitted temperature rises are respectively 20° C and 40° C higher than the values given for Class B insulation.
3. Classes of insulation are to be in accordance with IEC Publication 85 (1957) – "Recommendations for the Classification of Material for the insulation of Electrical Machinery and Apparatus in relation to their Thermal Stability in Service"

#### 6.4 Direct current service generators

- 6.4.1 Shunt wound direct current generators are to be provided with automatic voltage regulators.
- 6.4.2 Direct current generators used for charging batteries without series – regulating resistors are to be either:-
  - a) Shunt wound, or
  - b) Compound wound with switches arranged so that the series winding can be switched out of service.
- 6.4.3 If the terminal voltage is required to be manually adjusted to ensure satisfactory operation of generators then facilities are to be provided at the switchboard or at an appropriate and convenient control position to enable such adjustment to be made.
- 6.4.4 For each direct current generator, whilst being driven by its prime mover, at any temperature within the working range, the means provided is to be capable of adjusting the voltage at any load between no load and full load to within:-
  - a) 10 percent of rated voltage for generators of rating less than 100 (kW).
  - b) 0.5 percent of rated voltage for generators of rating exceeding 100 (kW).
- 6.4.5 The inherent rules of service generators is to be such that the following conditions are fulfilled:-

- a) For shunt or stabilized shunt wound generators when the voltage has been set at full load, the steady voltage at no load is not to exceed 115% of the full load value and the voltage obtained at any intermediate value is not to exceed no load value, operating temperature, and starting at 20 percent load with voltage within 1 percent of rated voltage, then at full load the voltage is to be within 2.5 percent of rated voltage. The average of the ascending and descending load / voltage curves between 20 percent load and full load is not to vary more than 4 percent from rated voltage.
  - b) For compound wound generators with the generator at full load operating temperature, and starting at 20 percent load with voltage with 1 percent of rated voltage, then at full load the voltage is to be within 2.5 percent of rated voltage. The average of the ascending and descending load / voltage curves between 20 percent load and full load is not to vary more than 4 percent from rated voltage.
- 6.4.6 Generators are to be capable of delivering continuously the full load current and normal rated voltage at the terminals when running at full load engine speed at all ambient temperatures up to the specified maximum.
- 6.4.7 Generators required to run in parallel are to be stable from no load up to the total combined load of the group, and load sharing is to be satisfactory.
- 6.4.8 The series winding of each two – wire generator is to be connected to the negative terminal.
- 6.4.9 Equalizer connections are to have cross-sectional area appropriate to the system but in no case less than 50 percent of that of the negative connection from the generator to the switchboard.

## **6.5 Alternating current service generators**

- 6.5.1 Each alternating current service generator, unless of the self-regulating type, is to be provided with automatic means of voltage rules.
- 6.5.2 The voltage of rules of any alternating current generator with its regulating equipment is to be such that at all loads from zero to full load the voltage at rated power factor is maintained under steady conditions within 2.5 percent of rated voltage.
- 6.5.3 Alternating current generators required to run in parallel are to be stable from 20 percent full load (kW) up to the total combined full load (kW) of the group, and load sharing is to be such that the load on any generator does not normally differ from its proportionate share of the total load by more than 15 percent of the rated output (kW) of the largest machine or 25 percent of the rated output (kW.) of the individual machine, whichever is less.

- 6.5.4 When generators are operated in parallel, the KVA loads of the individual generating sets are not to differ from their proportion at share of the total KVA load by more than 5 percent of the rated KVA output of the largest machine when operating at 0.8 power factor.

## **6.6 Inspection and testing**

- 6.6.1 On machines for essential services tests are to be carried out in accordance with the relevant standard and a certificate furnished by the manufacturer.
- 6.6.2 Generators and motors of 100 (kW) or over intended for essential services are to be inspected by the Surveyors during manufacture and testing.

## **Section 7**

### **Transformers – Construction and Testing**

#### **7.1 General**

- 7.1.1 Transformers are to be in accordance with an acceptable National or International Standard due regard being given to the ambient conditions stated in 1.5.
- 7.1.2 Transformers are to be of the dry, natural air cooler type. Proposals for the use of liquid cooled transformers will be subject to special consideration.

#### **7.2 Installation**

- 7.2.1 Transformers are to be placed in easily accessible well ventilated spaces free from any gaseous or acid fumes. They are to be clear of non-protected ignitable materials, and so arranged as to be protected against shocks and any damage resulting from water, oil, liquid fuel steam etc.

#### **7.3 Construction**

- 7.3.1 Transformers are to be double wound except those for motor starting.
- 7.3.2 Each transformer is to be provided with a name plate of corrosion – resistant metal giving information on make, type serial number insulation class and any other technical data necessary for the application of the transformer.

#### **7.4 Rules**

- 7.4.1 The inherent rules at 0.8 power factor is not to exceed 5 percent.
- 7.4.2 Rules of the complete system is to comply with 3.4.2.

#### **7.5 Short circuit**

- 7.5.1 All transformers are to be constructed to withstand, without damage, the thermal and mechanical effects of a short-circuit at the terminals of any winding for 2 seconds with rated primary voltage and frequency without damage.

**7.6 Tests**

- 7.6.1 Transformers for essential services are to be tested by the manufacturer in accordance with the relevant standard and test certificates supplied

**Section 8****Miscellaneous Equipment****8.1 Accumulator batteries****8.1.1 Construction**

- 8.1.1.1 The cells of all batteries are to be so constructed and secured as to prevent spilling of the electrolyte due to the motion of the vessel and to prevent emission of acid or alkaline spray.
- 8.1.1.2 All batteries are to be provided with durable labels of flame retardant material, giving information on the application for which the battery, is intended, voltage and capacity.

**8.1.2 Location**

- 8.1.2.1 Alkaline batteries and lead acid batteries of the vented type are not to be installed in the same compartment.
- 8.1.2.2 Large batteries are to be installed in a space assigned to them only. A box on deck would meet this requirement if adequately ventilated and provided with means to prevent ingress of water.
- 8.1.2.3 Engine starting batteries are to be located so close as practicable to the engine (s) served. If such batteries cannot be accommodated in the battery compartment, they are to be installed so that adequate ventilation is ensured.

**8.1.3 Installation**

- 8.1.3.1 Batteries should be so arranged that each cell or crate of cells is accessible from the top and at least one side.
- 8.1.3.2 Cells or crates are to be carried on non-absorbent insulating supports. Similar insulators are to be fitted to prevent any movement of cells arising from the motion of the vessel. Adequate space for circulation of air is to be ensured.
- 8.1.3.3 Where acid is used as the electrolyte a tray of acid resisting material is to be provided below the cells unless the deck-below is similarly protected.
- 8.1.3.4 The interiors of all compartments including the shelves, are to be painted with corrosion resistant paint.

8.1.3.5 A permanent notice is to be fitted to all compartments prohibiting naked lights and smoking in the compartment.

8.1.3.6 Switches, fuses and other electrical equipment liable to cause an arc are not to be fitted in battery compartments.

#### **8.1.4 Ventilation**

8.1.4.1 Battery compartments, lockers and boxes are to be adequately ventilated by an independent ventilation system to avoid accumulation of flammable gases. Particular attention should be given to the fact that these gases are lighter than air and tend to accumulate at the top of the spaces.

8.1.4.2 Natural ventilation may be employed if ducts can be run directly from the top of the compartment to the open air with no part of the duct more than 45 degrees from the vertical. If natural ventilation is impracticable, mechanical ventilation is to be installed. Interior surfaces of ducts and fans are to be painted with corrosion resistant paint. Fan motors are not to be located in the air stream.

8.1.4.3 Necessary precautions are to be taken to prevent sparking due to possible contact by the ventilation fan blades with fixed parts.

8.1.4.4 All openings through the battery compartment bulkheads or decks, other than ventilation openings, are to be effectively sealed to reduce the possibility of escape of gas from the battery compartment into the vessel.

### **8.2 Luminaries**

#### **8.2.1 General**

8.2.1.1 Lighting fittings installed in engine rooms or similar spaces where they are exposed to the risk of mechanical damage are to be provided with suitable grilled mechanical guards to protect their lamps and glass globes against such damage.

8.2.1.2 Precautions are to be taken so that a lamp for one voltage cannot be inserted in a lamp holder for another voltage.

8.2.1.3 Incandescent lamps are to be in accordance with the following:-

|     |                        |
|-----|------------------------|
| B22 | up to 250 V and 200 W  |
| F27 | up to 250 V and 200 W  |
| E40 | up to 210 V and 3000 W |

8.2.1.4 Lamp holders are to be constructed of flame-retarding and non-hygroscopic material. All metal parts are to be of robust construction. Goliath landholders (E40) are to be provided with means for locking the lamp in the holder. The temperature of cable

connection is not to exceed the maximum conductor temperature permitted for the cable as given in Table 3.2.1.

8.2.1.5 The ratings of tubular fluorescent lamps are not to exceed 250 V and 80 W.

### **8.3 Accessories – Construction and testing**

#### **8.3.1 Enclosure**

8.3.1.1 Enclosures are to be of metal or of flame – retardant insulating materials.

#### **8.3.2 Inspection and draw boxes**

8.3.2.1 If metal conduit systems are used, inspection and draw boxes are to be of metal and are to be in rigid electrical and mechanical connection with the conduits.

#### **8.3.3 Socket outlets and plugs**

8.3.3.1 Socket outlets and plugs are to be so constructed that they cannot be readily short-circuited whether the plug is in or out and so that a pin of the plug cannot be made to earth either pole of the socket outlet.

8.3.3.2 All socket outlets of current rating 16 amperes or more are to be provided with a switch.

8.3.3.3 Where it is necessary to earth the non-current-carrying parts of portable or transportable equipment, an effective means of earthing is to be provided at the socket outlet.

8.3.3.4 In all wet situations socket outlets and plugs are to be effectively shielded against rain and spray and are to be provided with means for maintaining this quality after removal of the plug.

### **8.4 Heating and cooking equipment**

#### **8.4.1 General**

8.4.1.1 Heaters are to be so constructed, installed and protected that clothing, bedding and other inflammable material cannot come in contact with them in such a manner as to cause risk of fire. There is to be no excessive heating of adjacent bulkheads or decks.

### **8.5 Lightning conductors**

8.5.1 Lightning conductors are to be fitted to each mast of all wood, composite and steel vessels having wooden masts or topmasts. They need not be fitted to steel vessels having steel masts, unless the mast is partly or completely insulated from the vessels hull.

8.5.2 Lightning conductors are to be run as straight as possible, and sharp bends in the conductors are to be provided. All clamps used are to be of brass or copper, preferably



of the serrated contact type, and efficiently locked. Soldered connections are not acceptable.

- 8.5.3 The resistance of the lightning conductors, measured between the mast head and the position on the earth plate or hull to which the lightning conductor is earthed, is not to exceed 0.02 ohms.
- 8.5.4 The lightning conductors are to be composed of continuous copper tape and / or rope, having a section not less than 100 (mm<sup>2</sup>) and are to be riveted with copper rivets or fastened with copper clamps to an appropriate copper spike of not less than 13 (mm) in diameter and projecting at least 150 (mm) above the top of the mast. The lower end of the lightning conductor is to be securely clamped to a copper plate having an area of at least 0.2 (m<sup>2</sup>), fixed to the vessel's hull well below the light load waterline in such a manner that it is immersed under all conditions of heel. In steel vessels fitted with wooden masts, the lower end of the lightning conductor is to be securely clamped to the nearest metal forming part of the hull.

## **Section 9**

### **Trials**

#### **9.1 General**

- 9.1.1 Before a new installation, or any alternation or addition to an existing installation, is put into service the tests and trials specified in this Section are to be carried out. These tests and trials are intended to demonstrate the general condition of the installation at the time of completion. They are in addition to any acceptance tests which may have been carried out at the manufacturer's works.

#### **9.2 Insulation resistance measurement**

- 9.2.1 Insulation resistance is to be measured using a self – contained instrument such as a direct reading ohm-meter of the generator type applying a voltage of at least 500 V. Where a circuit incorporates capacitors of more than 2 $\mu$ F total capacitance, constant – voltage type instrument is to be used to ensure accurate test readings.
- 9.2.2 Power and light circuits:- The insulation resistance between all insulated poles and earth and where practicable, between poles, is to be at least 1 mega ohm. The installation may be subdivided and appliances may be disconnected if initial tests produce results less than this figure.
- 9.2.3 Low voltage circuits:- Circuits operating at less than 55 V are to have an insulation resistance of at least 0.33 mega ohm.

9.2.4 Switchboards, section boards and distribution boards:- The insulation resistance is to be at least 1 mega ohm when measured between each bus bar and earth and between bus bars. The test may be made with all circuit breakers and switches open, all fuse links for pilot lamps, earth fault-indicating lamps, voltmeters, etc., removed and voltage coils temporarily disconnected, where otherwise damage may result.

9.2.5 Generators and motors:- The insulation resistance of generators and motors, in normal working condition and with all parts in place, is to be measured and recorded. The test should be carried out with the machine hot, if possible. The insulation resistance of generator and motor cables, field windings and control gear is to be at least 1 mega ohm.

### **9.3 Earth continuity**

9.3.1 Tests are to be made to verify that all earth continuity conductors are effective and that the bonding and earthing of metallic conduit and / or sheathing of cables is effective.

### **9.4 Performance**

9.4.1 It is to be established that the provisions of the Rules have been complied with respect of the criteria mentioned in this sub-section.

9.4.2 Temperatures of joints, connections, circuit-breakers and fuses.

9.4.3 The operating of engine governors, synchronizing devices over speed trips, reverse current reverse power, over current and under voltage trips and other safety devices.

9.4.4 Satisfactory commutation, excitation and performance of each generator throughout a run at a full rated load.

9.4.5 Voltage rules of every generator when full rated load is suddenly thrown off.

9.4.6 For alternating current and direct current generators, satisfactory parallel operation and (kW) load sharing of all generators capable of being operated in parallel at all loads up to normal working load. For alternating current generators satisfactory parallel operation and KVA load sharing of all generators capable of being operated in parallel at all loads up to normal working load.

9.4.7 All essential motors and other important equipment are to be operated under service conditions, though not necessarily at full load or simultaneously, for a sufficient length of time to demonstrate that they are satisfactory.

### **9.5 Voltage drop**

9.5.1 Voltage drop is to be measured, where necessary, to verify that this is not excessive.

**End of Chapter**

# **ANNEXURE – 2**

## **FORMS**

**As per IWAI 2013 Model Rules and / or as may be issued by GMB**  
**Through Executive Order**

**FORM NO. 1****(Rule 1.12)****Official Log Book****OFFICIAL LOG BOOK****For****AN INLAND MECHANICALLY PROPELLED VESSEL****(See Sub-rule 1.12 of these Rules and Section 63Cof IV Act 1917)**

| Name of Vessel                               | Official No. | Port of Registry | Registered Tonnage                            |     | Name of Master | No. of his Certificate |
|--|--------------|------------------|---|-----|----------------|------------------------|
|  |              |                  | Gross   | Net |                |                        |
|  |              |                  |   |     |                |                        |
| Port at which and date when voyage commenced |              |                  | Port at which and date when voyage terminated |     |                |                        |

**DIRECTIONS AS TO KEEPING OFFICIAL LOGS**

1. An official log shall be kept in the prescribed form in every Inland Vessel.
2. The official log may, at the discretion of the master or owner, be kept distinct from or united with the ordinary ship's log so that in all cases the spaces in the official log book be duly filled up.
3. The importance of keeping this book properly, and duly making all the entries at the proper time, and with the strictest regard to form, cannot be too strongly impressed on masters. By neglecting to do so masters render themselves liable to heavy penalties, and their owners to serious loss whilst member of their crew will suffer inconvenience from not being able to obtain records of their services. The absence of proper entries will also prevent fines or forfeitures from being enforced and will tend to prevent the maintenance of discipline.
4. An entry required by the Act in the official log book shall be made as soon as possible after the occurrence to which it relates, and, if not made on the same day as that occurrence, shall be made and dated so as to show the date of the occurrence and of the entry respecting it.
5. Every entry in the official log book shall be signed by the master and by the officer or some other member of the crew and also.

6. If it is an entry of injury or death, shall be signed by the medical officer on board, if any, and if it is an entry of wages due to or the property of a seaman or apprentice who dies, shall be signed by the officer and by some members of the crew besides the master.
7. Every entry made in an official log book in the manner provided by these rules shall be admissible in evidence.
8. Care must be taken whenever there is a change of master to see that documents handed over are up-to-date.
9. Entries must be made in order of date, and no blanks should be left.
10. If any entry in the Official Log relates in any way to a member of the crew the page number is to be entered against the man's name in the Official Log and Index.

**Entries required to be made in official log books**

1. If any offence within the meaning of the Act of desertion or absence without leave or against discipline is committed or if any act of misconduct is committed for which the offender's agreement imposes fine and it is intended to enforce the fine.
  - a) An entry of the offences or acts shall be made in the official log book and signed by the master and one of the persons employed or engaged in any capacity on board of the mechanically propelled vessel;
  - b) The offender shall be furnished with a copy of the entry and have the same read over distinctly and audibly to him and may thereupon make such reply thereto as he thinks fit;
  - c) A statement to a copy of the entry having been so furnished and entry having been so read over and the reply, if any made by the offender shall likewise be entered and signed in the manner aforesaid;
  - d) In any subsequent legal proceedings the entries by this section required shall, if practicable, be produced or proved, and in default of such production or proof, the court hearing the case may in its discretion refuse to receive evidence of the offence or act of misconduct.
2. Every case in which the crew has faced shortage of food and / or drinking water.
3. Every case in which a member of the crew is promoted to a higher grade of service with the date of such promotion, the grade and the rate of wages which the seaman is to receive.
4. In case of illness, frequent entries (daily if possible) showing the progress and treatment of patient.

5. Every case of drunkenness or misconduct on the part of any member of crew whether the Master wishes the case to be investigated or not.
6. Every important accident or damage to ship or cargo.
7. Every conviction by a legal tribunal of a member of his crew and the punishment inflicted;
8. A report on the quality of work of each member of his crew; or a statement that the master declines to give an opinion thereon with a statement of his reasons for so declining.
9. Every case of illness, hurt or injury happening to a member of his crew with the nature thereof and the medical treatment adopted (if any);
10. Every case of death happening on board and the cause thereof, together with such particulars as may be prescribed;
11. Every birth happening on board, with the sex of the infant, the names of the parents and such other particulars as may be prescribed;
12. The name of every seaman or apprentice who ceases to be a member of the crew otherwise than by death, with the place, time, manner and cause thereof;
13. The wages due to any seaman or apprentice who dies during the voyage and the gross amount of all deductions to be made there from;
14. The money or other property taken over of any seaman or apprentice who dies during the voyage;
15. Any other matter which is to be prescribed for entry in the official log book.

**FORM No. 1 A****(Rule 2.6.3)****Form for expressing the intention to build a new vessel****To,****Chief Surveyor / Competent Authority,****Govt. of \_\_\_\_\_**

**Subject:- Expressing of Intention to Build a New Inland Mechanically  
Propelled Vessel.**

Dear sir,

I / We \_\_\_\_\_ (name of the owner / company) intend to order building of a new mechanically propelled vessel to be registered in the State within the provisions of the Inland Vessel Act 1917.

You are requested to record the proposed details and accord the category under which the vessel is to be constructed. We hereby undertake to have the vessel constructed and equipped as per the construction rules applicable to the category of vessel assigned.

1. Owner's name and address
2. Length, breadth and depth of vessel\
3. Type of Vessel  
(Passenger, cargo cum passenger Chemical Carrier,  
Liquid Carrier etc)
4. Intended Area of Operation (Zone 1/2/3)
5. Particulars of hull
  - a) Builders name and address
  - b) Material of the hull
  - c) Whether with a deck above free board deck
6. Particulars of the propulsion of Engines
  - (a) Number of sets with BHP of each
  - (b) Manufacturer's name and brand

**Signature of Owner**

Enclosure:- Plans, Drawings etc. as per Rule 2.8.4 (b), (c) &amp; (d)

**FORM No. 2****(Rule 2.7.2)****Application for Survey of Inland Vessel****To,****Date:-****The Chief Surveyor / Surveying Authority****Place:-****At Port .....****Application for (indicate type) Survey of Inland Vessel**

I / We the authorized persons under the law hereby apply to you to make necessary arrangement for the Initial / Periodical / Dry Docking / Special Survey (strike out the not applicable ones) of the Inland Vessel detailed below:-

The particulars of the Vessel are as under:-

1. Name of vessel
2. Official No. of the vessel
3. Port of registry of vessel
4. Tonnage (i) Registered ..... (ii) Gross .....
5. Type of the vessel  
(Passenger / Passenger – cum – cargo / Cargo / Tanker – state type etc)
6. Category of the Vessel
7. Year Hull Built
8. Address of Hull Builder
9. Hull Dimensions
10. Place and date of last survey
11. Type & BHP of main propulsion Machinery
12. Details of other machineries
13. Owner's name and address with telephone no.
14. Agents name and address with telephone no.
15. Date and time of proposed visit of surveyor
16. Place of proposed Survey.

Station .....

Signature of Owner / Master / Authorized Person

Date .....



## Enclosures:-

1. Documents as per requirement
2. Proof of payment of Survey Fees and other charges
3. Copy of last Certificate of Survey
4. Copy of Certificate of Registration (if already registered)
5. Document establishing the Authority of Authorized Person (if making request)

**FORM No. 3****(Rule 2.7.4 a)****Particulars to be furnished for Survey of New Vessel or Vessels which  
are to be surveyed for the first time**

1. Name of vessel (if already named)
2. Owner's name and address
3. Length, breadth and depth of vessel
4. Type of Vessel.  
(Passenger, cargo cum passenger, Chemical Carrier, Liquid Carrier etc.)
5. Particulars of hull
  - a) Year of built
  - b) Builders name and address
  - c) Builders certificate
  - d) Material of the hull
  - e) Number of Bulkhead, their placement and thickness
  - f) Hull plating material and thickness
6. Particulars of propulsion of Engines
  - a) Number of sets fitted
  - b) Manufacturer's name and brand
  - c) Model Number
  - d) Year of built
  - e) Type of Engine with HP of each
  - f) Diameter of propulsion shaft and materials
  - g) Type and Number of gears
  - h) Test certificate
7. Particulars of equipment
  - a) Anchor – Port, Star board (weight & Material of each)
  - b) Anchor – Spare (weight & material of

each Equipment

- c) Chain : Size type and length and test certificate (Port)
- d) Chain : Size type and length and test certificate (Star board)
- e) Ropes – Size, material and number of ropes
- f) Search Lights, number size and power
- g) Life buoys, buoyant apparatus with self ignited lights, number with buoyant lanyard
- h) Navigation lights giving particulars and certificate, main mast, auxiliary mast, port, star board, stem, anchor not under command
- i) Shapes for anchor not under command etc.
- j) Sound signals : Mechanical or Electrical

8. Particulars of fire appliance

- a) Number, size and capacity of fire pumps
- b) Fire mains, diameter, material and number of hydrants
- c) Number of hose
- d) Nozzles
  - (i) Jet type
  - (ii) Spray type
  - (iii) Jet / Spray type
- e) Any other equipment

9. Number of portable fire extinguisher with particulars and name of manufacturers

- a) Soda Acid
- b) Foam
- c) Dry Powder

- d) Any other types
- 10. Particulars of communication equipment
- 11. Particulars of navigation equipment
- 12. Particulars of pollution control devices
  - a) Sewage treatment and disposal
  - b) Solid waste processing and disposal
  - c) Sound Pollution Control
  - d) Water consumption / day
  - e) Source of water
- 13. Plans, Drawings etc. : As per Rule 2.7.4 of the Rules

**FORM No. 4****(Rule 2.7.5)****Appointment of Date and Time of Survey of Inland Vessels**

Ref No.:

Dated:

To,

The owner or master,

(Name of the Inland Vessel)

Sir,

This has reference to your request for (Type of Survey) Survey of the Inland Vessel under Inland Vessel Act 1917 vide application No. \_\_\_\_\_ dated \_\_\_\_\_

Please be informed that the Surveyor will be boarding the vessel at \_\_\_\_\_ hrs on \_\_\_\_\_ for the purpose of the requested survey.

You are advised to keep all the documents and the vessel ready for the requested survey in accordance with the Inland Vessel Act 1917 and the Inland Vessel Rules of the State.

In case undue delay owing to lack of readiness of the vessel and / or its crew, the Surveyor may have to postpone the Survey for which all costs shall have to be borne by you in accordance with the Rules in force.

Yours Sincerely,

Chief Surveyor / Surveyor.

**FORM No. 5****(Rule 2.8.5)****Intimation of Defects / Deficiencies observed during the Survey of  
Inland Vessels**

Ref No.:

Dated:

To,

The owner or master,

(Name of the Inland Vessel)

Sir,

This has reference to (Type of Survey) survey of the above referred Inland Vessel carried out by me on \_\_\_\_\_ in accordance with the Inland Vessel Act 1917 and the applicable State Rules.

Please be advised that below detailed deficiencies / defects were observed during the Survey:-

- a) Hull -
- b) Machinery –
- c) Equipment –
- d) Documentation and Records –
- e) Manning –

You are requested to make good the above defects / deficiencies within days from the issuance of this letter and intimate the compliance in writing to this office for verification of the corrective measures in respect of above deficiencies.

Kindly note that if you fail to make good the above referred deficiencies / defects, your application under which this survey was conducted shall stand closed. Thereafter, you will be required to make a fresh application for the Survey.

Yours Sincerely,

Chief Surveyor / Surveyor.

**FORM No. 6****(Rule 2.9.1)****Declaration of Survey**

Ref.

No.

Dated:

This is to certify that I have surveyed the Inland Vessel named \_\_\_\_\_, Official No. \_\_\_\_\_, in accordance with the Inland Vessel Act 1917 and the applicable State Rules.

During the survey, the condition of vessel and its equipment as detailed in the RECORD OF VESSEL EQUIPMENT AND VESSEL INFORMATION attached as annexure of this Declaration of Survey.

Based on the details contained in this Record of Vessel Equipment and Vessel Information together with the number and quality of personnel manning the vessel, the vessel is fit for and inland waterways worthy for the trade / purpose stated therein.

Surveyor

Enclosure:- Record of Equipment and Vessel Information

**RECORD OF EQUIPMENT AND VESSEL INFORMATION**

| <b>Name of vessel</b> | <b>Type of vessel</b> | <b>Category of Vessel</b> | <b>Number of passengers</b> | <b>Official number</b> |
|-----------------------|-----------------------|---------------------------|-----------------------------|------------------------|
|                       |                       |                           |                             |                        |

| <b>Hull Material</b> | <b>Name of the Builder</b> | <b>Place of Building</b> | <b>Date of build</b> | <b>Means of Propulsion</b> | <b>Total BHP of Main Engine</b> | <b>Date of Engine Construction</b> |
|----------------------|----------------------------|--------------------------|----------------------|----------------------------|---------------------------------|------------------------------------|
|                      |                            |                          |                      |                            |                                 |                                    |

| <b>Length</b> | <b>Breadth</b> | <b>Depth</b> | <b>GRT</b> | <b>NRT</b> |
|---------------|----------------|--------------|------------|------------|
|               |                |              |            |            |

| <b>Fire fighting</b>        | <b>Number / Type</b> | <b>Condition</b> | <b>Location</b> |
|-----------------------------|----------------------|------------------|-----------------|
| Fire plan                   |                      |                  |                 |
| Fire pumps (hand)           |                      |                  |                 |
| Fire pumps (mech)           |                      |                  |                 |
| Portable extinguishers      |                      |                  |                 |
| Fixed extinguishing system  |                      |                  |                 |
| Components                  |                      |                  |                 |
|                             |                      |                  |                 |
| Fire buckets                |                      |                  |                 |
| Sand boxes                  |                      |                  |                 |
| Hydrants                    |                      |                  |                 |
| Hoses, fittings and nozzles |                      |                  |                 |

| <b>Equipment</b>       | <b>Number</b> | <b>Condition</b> | <b>Location</b> |
|------------------------|---------------|------------------|-----------------|
| Anchors                |               |                  |                 |
| Anchor cables / chains |               |                  |                 |
| Bilge pumps            |               |                  |                 |
| Winches                |               |                  |                 |



|                  |  |  |  |
|------------------|--|--|--|
| Cranes           |  |  |  |
| Derricks         |  |  |  |
| Towing equipment |  |  |  |
| Ropes and lines  |  |  |  |
| Collision mat    |  |  |  |
| Gangway          |  |  |  |
| Fenders          |  |  |  |
| Boat hook        |  |  |  |
| First aid kit    |  |  |  |
| Binoculars       |  |  |  |
| Waste containers |  |  |  |
| Heaving line     |  |  |  |
| Axe              |  |  |  |
| Torch            |  |  |  |

| Navigation Equipment     | Number | Condition | Location |
|--------------------------|--------|-----------|----------|
| Navigation lights        |        |           |          |
| Sound signals            |        |           |          |
| Shapes                   |        |           |          |
| Radar                    |        |           |          |
| Compass                  |        |           |          |
| GPS receivers            |        |           |          |
| Echo sounder             |        |           |          |
| Communications equipment |        |           |          |
| Nautical publications    |        |           |          |
| Log book                 |        |           |          |

| Location of passengers on specific decks and spaces in maximum loaded condition |  |  |  |  |  |  |
|---|--|--|--|--|--|--|
| Deck / Space  |  |  |  |  |  |  |
| Max. number of passengers   |  |  |  |  |  |  |

| <b>Free board</b>                  |       |  |  |  |
|------------------------------------|-------|--|--|--|
| Minimum freeboard, equivalent to:- | ..... |  |  |  |
| Number of passengers               |       |  |  |  |
| Cargo (tons)                       |       |  |  |  |

| <b>Life – saving equipment</b>  | <b>Number</b> | <b>Type / Condition</b> | <b>Location</b> |
|---------------------------------|---------------|-------------------------|-----------------|
| Life jackets                    |               |                         |                 |
| Life boats                      |               |                         |                 |
| Life rafts                      |               |                         |                 |
| Launching arrangements          |               |                         |                 |
| Flotation devices               |               |                         |                 |
| Life buoys                      |               |                         |                 |
| Flares – parachutes             |               |                         |                 |
| Flares – hand held              |               |                         |                 |
| Smoke signals                   |               |                         |                 |
| Emergency communications        |               |                         |                 |
| Radar transponder / reflector   |               |                         |                 |
| Rescue boat                     |               |                         |                 |
| Life raft / life boat equipment |               |                         |                 |

| <b>Machinery / Electrical</b> | <b>Power BHP</b> | <b>Type / Condition</b> | <b>Location</b> |
|-------------------------------|------------------|-------------------------|-----------------|
| Main machinery                |                  |                         |                 |
| Main generator                |                  |                         |                 |
| Emergency generator           |                  |                         |                 |
| Main steering gear            |                  |                         |                 |
| Auxiliary steering gear       |                  |                         |                 |
| Switch board                  |                  |                         |                 |
| Shore connection              |                  |                         |                 |
| Batteries                     |                  |                         |                 |
| Signal light switches         |                  |                         |                 |

| Accommodation / Safety                  | Condition | Comment |
|---|-----------|---------|
| Escape routes                           |           |         |
| Wash rooms                              |           |         |
| Toilets                                 |           |         |
| Galley                                  |           |         |
| Mess room                               |           |         |
| Water tanks                             |           |         |
| Heating / cooling / ventilation         |           |         |
| Berth / locker                          |           |         |
| Access to accommodation                 |           |         |
| Lighting                                |           |         |
| Machinery guards                        |           |         |
| Guard rails                             |           |         |
| Non – slip surfaces                     |           |         |
| Ladders / companion ways                |           |         |
| Noise insulation / protection / notices |           |         |
| Foam flotation material : density       |           |         |

Issued at ..... (Place of issue of certificate) ..... on ..... (Date of Issue) .....

(Signature of authorized official issuing the certificate) (Seal of the issuing authority appropriate)

**FORM No. 7****(Rule 2.10)****Notice Regarding Certificate of Survey**

Ref. No:

Dated:

To,

The Owner / Master,

Inland Vessel \_\_\_\_\_  
\_\_\_\_\_

Sir

This is to advise you that the Certificate of survey of the above named Inland Vessel, surveyed on \_\_\_\_\_ is ready for delivery, and it will be delivered at the office of the under signed at any time during office hours on application and payment of the following dues:-

1. \_\_\_\_\_
2. \_\_\_\_\_

You are hereby reminded of your obligation under section 8 (I) of the Act sending the declaration of survey within 14 days of its receipt by you to the officer appointed by the State Government, failing which you shall be liable to forfeiture under section 8(2).

Yours faithfully,

Certifying Authority

*(Appointed under Section 9(2) of the Act)*

**FORM No. 8****(Rule 2.11)****Application for Certificate of Survey**

From

.....  
.....  
.....

To

Certifying Authority (*appointed under section 9(2) of the Act*)

.....  
.....

Sir,

**Subject : Application for certificate of Survey**

This has reference to your Notice regarding Certificate of Survey No. \_\_\_\_\_  
\_\_\_\_\_ dated \_\_\_\_\_ intimating about the readiness of Certificate of Survey  
in respect of Inland Vessel \_\_\_\_\_

It is requested that the Certificate of Survey may kindly be issued.

Yours faithfully,

Signature

Name of the Owner

**FORM No. 9****(Rule 2.12)****Certificate of Survey – Category A Vessels**

Certificate of Survey No. \_\_\_\_\_ Vessel Category: \_\_\_\_\_

Date of Issue: \_\_\_\_\_ Date of Expiry: \_\_\_\_\_

This is Certificate of Survey has been issued subsequent to Survey carried out of the below detailed inland vessel.

Name of the Vessel \_\_\_\_\_ Official No. \_\_\_\_\_

Port of Registry \_\_\_\_\_ Certificate of Registry No. \_\_\_\_\_

Gross Tonnage \_\_\_\_\_ Registered Tonnage \_\_\_\_\_

Name of the Master \_\_\_\_\_

Master's Coc Grade \_\_\_\_\_ No. \_\_\_\_\_ Place of Issue \_\_\_\_\_

Name and Address of Owner or Agent \_\_\_\_\_

Date Survey Carried Out \_\_\_\_\_ Place Survey Carried Out \_\_\_\_\_

**PLYING LIMITS:-**

Limits beyond which this Vessel is not to ply.

\_\_\_\_\_

\_\_\_\_\_

**NUMBER OF PASSENGERS**

This Inland Vessel is, according to the declaration of the Surveyor, fit to carry, when there is no Encumbrance of Passengers Accommodation.

| Deck<br>passengers | A  | B  | C   | Second<br>Cabin<br>Passengers | Saloon<br>Passengers |
|--------------------|--|--|---|-------------------------------|----------------------|
|                    | When plying<br>by night<br>(smooth and<br>partially<br>smooth<br>waters) | When plying<br>by day<br>(smooth and<br>partially<br>smooth<br>waters) | When plying<br>by day on<br>voyages<br>which do not<br>last more<br>than six<br>hours<br>(smooth<br>water only) |                               |                      |

|                       |  |  |  |  |  |
|-----------------------|--|--|--|--|--|
| (i) between decks     |  |  |  |  |  |
| (ii) main decks       |  |  |  |  |  |
| (iii) upper or bridge |  |  |  |  |  |
| TOTAL                 |  |  |  |  |  |
| Grand Total           |  |  |  |  |  |

*\* Two Children under 12 years of age to be reckoned as one passenger*

#### **ENCUMBERANCE:-**

In case the space measured for passenger accommodation is occupied by cattle, or by cargo, or other articles, the above stated passenger carrying capacity is to be adjusted as follows:-

|   |  |  |
|---|--|--|
| When plying by night (Smooth and partially smooth water)                              | Then for every 9 superficial feet of such space so occupied on the deck or in the cabins   | ONE PASSENGER is to be deducted from the numbers above stated. |
| When plying by day (Smooth and partially smooth water)                                | Then for every 6 superficial feet of such space so occupied on the upper or main deck, and for every 9 superficial feet of such space so occupied in the between decks or in the cabins. | ONE PASSENGER is to be deducted from the numbers above stated. |
| When plying by day on voyages which do not last more than 6 hours (smooth water only) | Then for every 3 superficial feet of such space so occupied on the upper or main deck, and every 9 superficial feet of such space so occupied in the between deck or in the cabins.      | ONE PASSENGER is to be deducted from the numbers above stated. |

Freeboard Assigned \_\_\_\_\_ mm; Loading Marks placed on the vessel's side: Yes / No.

Maximum permissible Cargo carriage capacity: \_\_\_\_\_ tons and / or \_\_\_\_\_ passengers.

Safety Equipment carried on the Vessel:-

| Boats |                                 |            | Safety Equipment (LSA / FFA)<br>carried on the vessel |  |
|-------|---------------------------------|------------|---|--|
| Boat  | of the aggregate<br>capacity of | cubic feet |   |  |
|       |                                 |            |   |  |

THIS IS TO CERTIFY that the provision of the law with respect to the survey of the above mentioned Inland Vessel and the Transmission of declaration in respect thereof, have been complied with.

THIS CERTIFICATE, unless previously cancelled or revoked, to be in force until the ..... day of ..... 20.....

Examined and Registered.

Signed by Chief Surveyor

1. If the vessel is out of place of survey, it must be surveyed and have a new Certificate before it first begins to play and after its return or subsequent return to place of survey.
2. THIS CERTIFICATE, OR THE DUPLICATE there of, or copy in the vernacular is to be put up in a conspicuous place or part of the vessel where it will be visible to all persons on board the same.
3. In case of any accident occasioning loss of life, or any material damage affecting the seaworthiness or efficiency or the vessel to be either in the hull or in part of the machinery a report by letter, signed by the Owner or Master is to be forwarded to the authorized engineer and ship surveyor's Office, within 24 hours after the happening of the accident, or as soon thereafter as possible.



**FORM No. 10****(Rule 2.12)****Certificate of Survey – Category B Vessels**

Certificate of Survey No. \_\_\_\_\_ Vessel Category: \_\_\_\_\_

Date of Issue: \_\_\_\_\_ Date of Expiry: \_\_\_\_\_

This is Certificate of Survey has been issued subsequent to Survey carried out of the below detailed inland vessel.

Name of the Vessel \_\_\_\_\_ Official No. \_\_\_\_\_

Port of Registry \_\_\_\_\_ Certificate of Registry No. \_\_\_\_\_

Gross Tonnage \_\_\_\_\_ Registered Tonnage \_\_\_\_\_

Name of the Master \_\_\_\_\_

Master's Coc Grade \_\_\_\_\_ No. \_\_\_\_\_ Place of Issue \_\_\_\_\_

Name and Address of Owner or Agent \_\_\_\_\_

Date Survey Carried Out \_\_\_\_\_

Place Survey Carried Out \_\_\_\_\_

**PLYING LIMITS:-**

Limits beyond which this Vessel is not to ply.

\_\_\_\_\_

\_\_\_\_\_

Freeboard Assigned \_\_\_\_\_ mm; Loading Marks placed on the vessel's side: Yes / No.

Maximum permissible Cargo carriage capacity: \_\_\_\_\_ tons.

Safety Equipment carried on the Vessel:-

| Boats |                                 |            | Safety Equipment (LSA / FFA)<br>carried on the vessel |  |
|-------|---------------------------------|------------|---|--|
| Boat  | of the aggregate<br>capacity of | cubic feet |   |  |
|       |                                 |            |   |  |

THIS IS TO CERTIFY that the provision of the law with respect to the survey of the above mentioned Inland Vessel and the Transmission of declaration in respect thereof have been complied with.

THIS CERTIFICATE, unless previously cancelled or revoked, to be in force until the .....  
day of ..... 20.....

Examined and Registered.

Signed by Chief Surveyor

1. If the vessel is out of place of survey, it must be surveyed and have a new Certificate before it first begins to play and after its return or subsequent return to place of survey.
2. THIS CERTIFICATE, OR THE DUPLICATE there of, or copy in the vernacular is to be put up in a conspicuous place or part of the vessel where it will be visible to all persons on board the same.
3. In case of any accident occasioning loss of life, or any material damage affecting the seaworthiness or efficiency or the vessel to be either in the hull or in part of the machinery a report by letter, signed by the Owner or Master is to be forwarded to the authorized engineer and ship surveyor's Office, within 24 hours after the happening of the accident, or as soon thereafter as possible.

**FORM No. 11****(Rule 2.16.2)****Application for Change of Name of the Vessel**

Dated:

Ref. No :

From

.....  
.....  
.....

To,

The Chief Surveyor of Inland Vessels,

.....

Sir,

Sub : Change of name of the vessel on Certificate of Survey No. ....

I ..... R / O ..... being  
the owner / master of the Inland Vessel ..... (name)  
bearing Official No. .... hereby request that the name of the vessel may be  
changed as ..... (here enter the new  
name).

The certificate of survey No. .... dated ..... in original is enclosed  
herewith for making the change of name.

Signature

Name of owner / master

Enclosure: As stated above.

**FORM No. 11 (a)****(Rule 2.3.6)****Detention Order of the Vessel**

Dated:

Place:

To,

The Master / Owner,

Inland Vessel:- \_\_\_\_\_

Kindly be advised that Inland Vessel ..... Official No. ....  
of ..... Port of registry was inspected by the undersigned at .....  
on ..... at the port of .....

In view of the defects / deficiencies listed as annexure to this letter, the vessel is hereby provisionally detained under the power vested under rule 2.4.6 Inland Vessels Rules of the State.

The Vessel is forbidden to sail out from the port last inspected by the undersigned till further orders.

The master / owner have been issued copy of this order together with annexure on ..... at .....

OR

The master / owner have refused to accept the Order and the Order is pasted on the vessel on ..... in the presence of ..... whose signature are appended below.

Signature

**FORM No. 12****(Rule 3.3.1)****Book of Registration**

Registration Mark \_\_\_\_\_

Name of Vessel \_\_\_\_\_

Port of Registry \_\_\_\_\_ Year of Registry \_\_\_\_\_

Name of the Owner \_\_\_\_\_

Address of  
Owner \_\_\_\_\_**DESCRIPTION OF INLAND VESSEL**

Type of Vessel Cargo / Passenger etc. \_\_\_\_\_ Category \_\_\_\_\_

Gross Tonnage \_\_\_\_\_ Registered Tonnage \_\_\_\_\_

**PARTICULARS OF VESSELS**

Length overall \_\_\_\_\_

Breadth Extreme \_\_\_\_\_

Depth of underside of deck amid ships, at side \_\_\_\_\_

Builder Name and Address \_\_\_\_\_

Year of Built \_\_\_\_\_

Type of Hull wood, steel etc. \_\_\_\_\_

Number of Decks \_\_\_\_\_

No. of Bulkheads \_\_\_\_\_

**TRANSACTION**Name of person from whom  
title is derivedNo. of Shares  
affectedDate of and hour  
of Registry**ENGINE**

Internal combustion engine No. \_\_\_\_\_

Description \_\_\_\_\_

No. of sets \_\_\_\_\_

Made by \_\_\_\_\_

Year of Make \_\_\_\_\_

Surface, jet or Non condensing \_\_\_\_\_

No. of cylinders per set \_\_\_\_\_

Diameter of cylinder in inches \_\_\_\_\_

Stroke in inches \_\_\_\_\_

N.H.P. \_\_\_\_\_ B.H.P. \_\_\_\_\_ I.H.P. \_\_\_\_\_

**PROPULSION**

Type : Single/twin screw/side quarter etc. \_\_\_\_\_

Revolution per minute (RPM) \_\_\_\_\_ Speed of Vessel \_\_\_\_\_

Propulsion geared or direct driven \_\_\_\_\_

REGISTERING AUTHORITY

Date \_\_\_\_\_

**SUBSEQUENT TO REGISTRATION**

Nature & Date of transaction

Name, Residence and occupation

Number of transaction of

Transferee Mortgagee or other

Person acquiring title or power

**FORM No. 13****(Rule 3.4)****Application for Registration**

To

The Registering Authority,

\_\_\_\_\_

I,

.....

Resident of .....

being the Owner / Master of an Inland Vessel .....

hereby request that the said vessel be registered at the .....

I agree to pay such fees as may be payable under the Rules. Particulars in respect of the said Vessel is as under:-

1. Owner's name and address in full
2. Occupation
3. Name of Master and his Certificate No.
4. Name of Registry and No. if previously registered
5. When and how the vessel was secured
6. Kind of vessel, viz. motor, name and address of engine makers with horse power, speed and the year of make.
7. Name and address of builders with place and year of build.
8. Details of Insurance Certificate Enclosures:-
  - a) A statement by the owner that the provisions of the Act and these rules have been complied with; A duplicate of the Certificate of Survey;
  - b) Challan receipt evidencing payment of such fees as specified in the schedule for the registration of the vessel.
  - c) Copy of the 3<sup>rd</sup> party insurance certificate of the vessel duly attested.

Place:-

Signature of the Owner / Master of the vessel

Date:-



**FORM NO. 14****(Rule 3.7.1(a))****Declaration of Ownership**

I / We \_\_\_\_\_

subject to the state of \_\_\_\_\_ residing permanently at \_\_\_\_\_

having original place of business at \_\_\_\_\_

do hereby declare that vessel named \_\_\_\_\_

was built at \_\_\_\_\_

in the year \_\_\_\_\_ and was purchased by me on \_\_\_\_\_

for rupees \_\_\_\_\_

and wish to have the same registered in my name at the port of \_\_\_\_\_ and that I am the sole owner of the same. I further declare that the vessel is intended to ply in the port of \_\_\_\_\_

**Signature of Owner**

Made and subscribed the \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_\_ by \_\_\_\_\_ the above named \_\_\_\_\_ in the presence of \_\_\_\_\_

**Signature of Magistrate / Notary Public / Registering Authority**

*Note:- The declaration shall be made before a registering Authority, a Magistrate or a Notary Public.*

**FORM No. 15****(Rule 3.7.2)****Appointment of Date and Time of Inspection of the Inland Vessel****By the Registering Authority**

Dated:

Ref. No.:

To,

The Owner / Master of the Inland Vessel

\_\_\_\_\_  
\_\_\_\_\_

Sir / Madam,

In acknowledging receipt of your application for registration of the vessel named above under Inland Vessel Act 1917 (1 of 1917) this to state that Registering Authority / Surveyor shall proceed on board the vessel at \_\_\_\_\_ hours on \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

You are requested to afford the Registration Authority / Surveyor all reasonable facilities for the registration of the Inland Vessel and all such information respecting the vessel as he may require for the purpose of registration.

Yours faithfully

**Registering Authority**

Inland Vessel

**FORM No. 16****(Rule 3.7.4)****Carving and Marking Note**

Dated :

Ref. No. :

To,

The Owner / Master of the Inland Vessel

---

---

Sir / Madam

This has reference to your application for registration of above named vessel and subsequent enquiry of the vessel conducted under the provisions of section 3.8 of these rules. You advised to have the below enumerated marks carved on the vessel's hull as per the provisions of section 3.11 of these rules:-

Name of Vessel:-

Official No. \_\_\_\_\_

Port of Registry:- \_\_\_\_\_ Year of Registry: \_\_\_\_\_

You are further advised to contact this office after the completion of requisite carving (which in no case shall be greater than 15 days from the date of issue of this letter) for final inspection for the purpose of registering the vessel.

Please also be advised that you shall be required to surrender this carving note in original at the time of issuance of Certificate of Registry.

Yours faithfully

**Registering Authority**

Inland Vessels

---

**FORM No. 17****(Rule 3.12.3)****Application for Registration of Alternation**

To,  
The Registering Authority,

\_\_\_\_\_

Sir / Madam,

I, \_\_\_\_\_

being the owner of the inland vessel named Official No. \_\_\_\_\_

hereby report that the following alterations have been carried out on the vessel:-

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

I therefore, apply for registering the alternations / the issue of a fresh Registration Certificate.

I enclose herewith a duplicate copy of treasury challan showing the deposit of the necessary fees.

I also enclose herewith the original certificate of Registration No.

Date. \_\_\_\_\_

(SIGNATURE OF THE OWNER)

**FORM No. 18****(Rule 3.13)****Application for Transfer of Registry**

To,

Registering Authority

\_\_\_\_\_

I, \_\_\_\_\_ resident of \_\_\_\_\_

\_\_\_\_\_

being the owner of an Inland Vessel name \_\_\_\_\_

official no. \_\_\_\_\_ here by request that the registry of the said vessel may

kindly be transferred from your register to the register of the Registering Authority of \_\_\_\_

\_\_\_\_\_. The certificate of registration is enclosed herewith.

The certificate of registration will be forwarded to the Registering Authority of \_\_\_\_\_

\_\_\_\_\_ on demand.

Treasury Challan for Rs. \_\_\_\_\_ is also enclosed.

Place

Date \_\_\_\_\_

SIGNATURE OF OWNER

**FORM No. 19****(Rule 3.19.2)****Appeal against Refusal to Register / Cancellation / Suspension of the  
Certificate of Registry**

Dated :

To,

The Appellant Authority,

\_\_\_\_\_

Dear Sir / Madam

This is to request your kind attention to my appeal regarding Certificate of Registry in respect of my inland vessel named \_\_\_\_\_. The required details pertaining to my case are as follows:-

1. Name of the Appellant
  2. Registering Authority passing the original Order
  3. Date of receipt of the original Order
  4. Nature of the order appealed against (specify whether the order is under section 19F, 19 N or 19 O of the Act) with No. and date of the Order
  5. Address at which the appellant undertakes to receive the notices
  6. Address to which the notice may be sent to the respondent.
  7. Relief claimed in the appeal
  8. Grounds of Appeal.
    - i)
    - ii)
    - iii)
- etc

Place:-

Signature of

Date:-

Appellant / Authorized Representative

Verification

I / We ..... the Appellant do hereby declare  
that what is stated above is true to the best of my / our knowledge, information and belief.

Dated this ..... day of .....

Signature of Appellant (s)

N. B. The appeal shall be presented in duplicate and should be accompanied by two copies (at least one of which should be the original or an attested copy) of the order appealed against.

**FORM No. 20****(Rule 3.21.8)****Instrument creating Mortgage**

Name of the Vessel \_\_\_\_\_ Official No. \_\_\_\_\_

Certificate of Registry No. \_\_\_\_\_ Place of Registry \_\_\_\_\_

Date of Registry \_\_\_\_\_

Description of the vessel (whether propelled wholly or in part by electricity, steam or other mechanical power): \_\_\_\_\_ Horse power of Engine: \_\_\_\_\_

Hull (Length for identification .....)

**Equipment:-**

| Boats | Length | Breadth | Depth |
|-------|--------|---------|-------|
| No. 1 | .....  | .....   | ..... |
| No. 2 | .....  | .....   | ..... |
| No. 3 | .....  | .....   | ..... |

Gross Registered Tonnage \_\_\_\_\_ Net Registered Tonnage \_\_\_\_\_

and described in more detail in the certificate of survey and book of registry.

I / We the undersigned **(Full Name & Address with description of mortgager or mortgagers)** in consideration of ..... this day lent to **(Full name, address and description of mortgagee. If joint mortgagees are concerned they shall be described, if the Mortgagee is a Company, the full title and address shall be given).**

***Me / Us*** ..... do hereby for ***Myself / ourselves*** and ***my / our*** heirs, executors or administrators covenant with the said .....

**Firstly**, that **(Full Name & Address with description of mortgager or mortgagers)** or ***my / our*** heirs, executors, or administrators, will pay to the said ..... the said sum of ..... together with interest thereon at the rate of ..... percent, per annum on the **(Insert day fixed for Payment of Principal Amount)** day of ..... next.

**Secondly**, that if the said principal sum is not paid on the said day **(Full Name & Address with description of mortgager or mortgagers)** or ***my / our*** heirs, executors of administrators,



will during as the same or any part thereof remains unpaid, pay to the said .....  
..... interest on the whole or such part thereof as may for the time being  
remain unpaid, at the rate of ..... percent per annum, by equal half-yearly payment on  
the ..... day of ..... and ..... Day of ..... in  
ever year; and for better securing to the said ..... the re-payment in manner aforesaid  
of the said principal sum and interest.

*I / We* hereby mortgage to the said ..... shares of which **(Full Name & Address with  
description of mortgager or mortgagers)** the owner in the Inland Vessel above particulars  
described, and in her boats, and appurtenances.

**Lastly, I / We** for *myself / ourselves* and *my / our* heirs, executors or administrators covenant  
with the said ..... and his assigns that *I / We* have power to mortgage  
in manner aforesaid the above mentioned shares, and that the same are free from  
encumbrance **(I any prior encumbrances add, "save as appears by the book of registration  
of the said vessel")**.

In witness where of *I / We* have here unto subscribed *my / our* name and affixed **(full name  
and address with description of the mortgager or mortgagers)** seal this ..... day of  
..... and Executed by the above named ..... in the presence of  
Witness 1 (Name, Full Address and Signature, Seal) .....

Witness 2 (Name, Full Address and Signature, Seal) .....

**Mortgage (By Company or Body Corporate) (to secure principal sum and interest)**

Name of the Vessel \_\_\_\_\_ Official No. \_\_\_\_\_

Certificate of Registry No. \_\_\_\_\_ Place of Registry \_\_\_\_\_

Date of Registry \_\_\_\_\_

Description of the vessel (whether propelled wholly or in part by electricity, steam or other  
mechanical power): \_\_\_\_\_ Horse power of Engine : \_\_\_\_\_

Hull (Length for identification .....)

**Equipment:-**

| Boats | Length | Breadth | Depth |
|-------|--------|---------|-------|
| No. 1 | .....  | .....   | ..... |
| No. 2 | .....  | .....   | ..... |
| No. 3 | .....  | .....   | ..... |

Gross Registered Tonnage \_\_\_\_\_ Net Registered Tonnage \_\_\_\_\_

and described in more detail in the certificate of survey and book of registry.

We, (Name in full of Company together with its principal place of business) in consideration of ..... this day lent to us by (Full name, address and description of mortgage. If joint mortgages are concerned they shall be described, if the mortgagee is a Company, the full title and address shall be given) do hereby for ourselves and our successor covenant with the said ..... and *his / theirs / its* assigns firstly, that we or our successors, will pay to the said ..... or *his / theirs / its* assigns the said sum of ..... together with interest there on at the rate of ..... percent per annum of the (Insert the day fixed for payment of principal) as above day of ..... next ; and

**Secondly**, that of the principal sum is not paid on the said day, we or our successors will, during such time as the same or any part thereof remains unpaid, pay to the said ..... or *his / theirs / its* assigns interest on the whole or such part thereof as may for the time being unpaid, at the rate of ..... percent, per annum, by equal half – yearly payments on the ..... day of ..... and day of ..... in every year, and for better securing the said ..... the repayment in manner aforesaid of the said principal sum and interest we hereby mortgage to the said ..... share / shares of which we are the Owners in the vessel above particularly described and in her boats and appurtenances.

**Lastly**, we for ourselves and our successors covenant with the said ..... and *his / theirs / its* assigns that we have power to mortgage in manner aforesaid the above mentioned shares and the same are free from encumbrances. (If any prior encumbrances add, "save as appears by the book of registration of the vessel.")

In witness where of we have hereunto affixed our common seal this ..... day of ..... and the common seal of the ..... was affixed hereunto in the presence of ..... (Description of witnesses, Directors, Secretary as the case may be)

**FORM No. 21****(Rule 3.21.9)****Instrument creating Transfer of Mortgage****By Individual or Joint Owners**

*I / We* the within – mentioned ..... son of ..... in consideration of ..... this day paid to *Me / Us* by ..... hereby transfer to *Him / Them / It* ..... the benefit of the within written security.

In witness thereof *I / We* have here-un-to subscribed *My / Our* name ..... and affixed *My / Our* seal this ..... Day of ..... and Executed by the above – named ..... in the presence of (Name, address and signature of at least two witnesses).

(By Company or Body Corporate)

The within – mentioned ..... in consideration of ..... this day paid to it by ..... hereby transfer to *Him / Them / It* the benefit of the within written security.

In witness whereof we have unto affixed out common seal this ..... day of .....

This common seal of the ..... was affixed in presence of (Signature and description of at least two witnesses, directors, secretary etc. as the case may be.)

N. B. – In the case of transfer of mortgage it shall be made by endorsement in the above forms.

**FORM No. 22****(Rule 3.21.10)****Instrument creating Discharge of Mortgage**

**In case of Mortgage is paid off, a Memorandum of its Discharge one of the following forms must be used.**

**By Individual Or Joint Owners**

Received the sum of ..... in discharge of this within written security, dated ..... day of ..... 20.....

(\*) The name and signature of at least two witnesses.

**By Companies or Body Corporate**

Received the sum of ..... in discharge of the within – written security.

In witness whereof we have here-un-to affix our common seal this ..... Day of ..... 20..... at .....

The common seal of the ..... was affixed with presence of ..... (Description and Signature of at least two witnesses i.e. Director, Secretary etc.)

**FORM NO. 23****(Rule 4.4 4.5 4.5 (a))****Application Form for appearing in Certificate of Competency**

APPLICATION FOR CERTIFICATE OF COMPETENCY TO AT AS ENGINEER /  
ENGINE DRIVER / SERANG / MASTER OF AN INLAND MECHANICALLY  
PROPELLED VESSEL.

Note:- The applicant shall submit this form duly filled in along with the necessary certificates to the examination center for permission to appear in the examination.

**PART – A**

## Personal particulars

- |     |                   |    |
|-----|-------------------|----|
| (1) | Name in full      | :- |
| (2) | Surname           | :- |
| (3) | Nationality       | :- |
| (4) | Permanent Address | :- |
|     |                   | :- |
|     |                   | :- |
| (5) | Date of birth     | :- |
| (6) | Place of birth    | :- |

Passport size  
photograph of the  
applicant

**PART – B**

## Particulars of all previous certificates (if any)

- |     |  |    |
|-----|--|----|
| (1) | Number   | :- |
| (2) | Competency of service  | :- |
| (3) | Grade  | :- |
| (4) | Where issued   | :- |
| (5) | Date of issue  | :- |
| (6) | Is the certificate at any time suspended or cancelled by court or authority (if yes provide details) ..... |    |
|     | .....  |    |

**PART – C**

Certificate now required

- (1) Grade :-  
(2) Competency :-

**PART – D**

HAVE YOU APPEARED FOR THIS EXAMINATION EARLIER ? Yes / No.

If Yes mention year &amp; month.

**PART – E**

Declaration to be made by applicant:-

N. B. Any person who makes, procures to be made or assists in making any false representation for the purpose of obtaining for himself, or any other person, a certificate either of competency or service, is for each offence liable to be punished for cheating under Section 420 of the Indian Penal Code and also for knowingly giving false information to the public servant under section 182 of the Indian Penal Code of 1860.

**DECLARATION**

I do hereby declare that the particulars contained in Part A, B, C, D & E of this form are correct and true to the best of my knowledge and belief, and that the papers enumerated in Part – G and sent with this form are true and genuine documents, given and signed by the persons whose names appear on them, I further declare that the statement in Part – G contains true and correct account of the whole of my services without exceptions.

Date:- .....

Signature of the Applicant

Present Address .....

.....

**PART – E****CERTIFICATE OF THE EXAMINER**

The declaration under Part – E above was signed in my presence and the fee of Rs..... received.

Date:

Examiner

**PART – G****LIST OF TESTIMONIALS AND STATEMENT OF SERVICE ON RIVERS OR SHORE OR SEA**

1. If served on board ship
  - (i) No. of testimonials / certificates (if any):-
  - (ii) Name of ship where employed:-
  - (iii) Horse power of the engine on which worked:-
  - (iv) Port of registry and official no. of the ship:-
2. Service particulars of the Applicant:-
  - (i) Capacity:-
  - (ii) Date of appointment
  - (iii) Date of termination / leaving
  - (iv) State if continuing
  - (v) Total period served
    - (a) Years:-
    - (b) Months:-
    - (c) Days:-
  - (vi) Total service
  - (vii) Total service on shore / river:-
  - (viii) Period served for which certificates are not produced:-
  - (ix) Period served for which no certificates are produced:-

**PART – H****CERTIFICATE OF THE EXAMINER**

Note:- The examiner should fill up Part – H and I and forward this form to the Chief Examiner along with the testimonials and other certificates.

1. Date and place of examination
2. Insert passed or failed against each item below:-
  - (i) In written examination:-
  - (ii) In the viva examination:-
3. Rank for which passed:-



## PART – I

## PERSONAL DESCRIPTION OF APPLICANT

1. Height:-  
Meters \_\_\_\_\_ Centimeters \_\_\_\_\_
2. Complexion:- \_\_\_\_\_
3. Personal marks or peculiarities, if any:- \_\_\_\_\_
4. Color of (a) Hair:- \_\_\_\_\_  
(b) Eyes:- \_\_\_\_\_

I hereby certify that the particulars contained in Part – H and Part – I are correct.

Date:- .....

Place:- .....

Name and signature of examiner

**FORM No. 24****(Rule 4.4, 4.5, 4.5 (a))****Medical Certificate for appearing in Certificate of Competency**

(To be filled in by a registered medical practitioner appointed for the purpose by the State Government or person authorized in this behalf by the State Government)

1. Name of applicant:-
2. Identification Marks:- (1)  
(2)
- 3 (a) Does the applicant to the best of your judgment suffer from any defect of vision ? Yes / No  
If so, has it been corrected by suitable spectacles ? Yes / No
- (b) Can the applicant to the best of your judgment readily distinguish the pigmentary colors, red and green ? Yes / No
- (c) In your opinion is he able to distinguish with his eye sight at a distance of 25 meters in good day light ? Yes / No
- (d) In your opinion does the applicant suffer from a degree of deafness which would prevent his hearing the ordinary sound signals ? Yes / No
- (e) In the opinion does the applicant suffer from night blindness ? of deformity or lose of number which would interfere with the efficient performance of his duties as a driver ? Yes / No  
If so, give your reasons in detail:-

I certify that I have personally examined the applicant .....  
..... I also certify that while examining the applicant I have directed special attention to distant vision and hearing ability the condition of the arms, legs, heads, hand joints of both extremities of the candidate and to the best of my judgment he is medically fit / not fit to hold a driving license.

The applicant is not medically fit to hold a license for the following reasons:-

## Signature

1. Name and designation of the Medical Officer / Practitioner  
(Seal)
2. Registration Number of Medical Officer

Signature or thumb impression of the Candidate

Date:-

Note:- The Medical Officer shall affix his signature over the Photograph affixed in such a manner that part of his signature is upon the photograph and part on the certificate.

**FORM No. 25****(Rule 4.4.7 & 4.5.7)****Certificate of Service**

No. :-

Name :-

Son / wife / daughter of :-

Permanent Address :-

Present Address :-

Date of Birth :-

Height :-

Marks of identification (1)

(2)

PHOTO

Signature or Left Thumb Impression

Based on assessment of your service record in Army / Navy / Coast Guard, your medical fitness certificate and the preparatory course for \_\_\_\_\_ together with the 4 basic safety course certificates, I have been found duly qualified to fulfill the duties of a \_\_\_\_\_ (Master / Serang / Engine Driver / Lascar) on an Inland mechanically propelled Vessel \_\_\_\_\_ (limitations if any), I do hereby under the provisions of the rules issued under Inland Vessels Rules, 2012 grant you the certificate of competency as a \_\_\_\_\_ (First class Master / Second class Master / Serang / Engineer / First Class Engine Driver / Second Class Engine Driver / Lascar) on an inland mechanically propelled vessel \_\_\_\_\_ (limitations if any).

Date:- .....

Place:- .....

Name and signature of Chief Examiner

**FORM No. 26****(Rule 4.4.8 & 4.5.8)****License to act as Master / Engineer of an Inland Vessel**

No. :-

Name :-

Son / wife / daughter of :-

Permanent Address :-

Present Address :-

Date of Birth :-

Height :-

Marks of identification (1)

(2)

PHOTO

Signature or Left Thumb Impression

---

Based on assessment of your service record and Master Class 2 / Engine Driver Class 1 Certificate of Competency No. \_\_\_\_\_ dated:- \_\_\_\_\_ issued date \_\_\_\_\_ I hereby grant you this License to act as Master / Engineer of an Inland Vessel up to \_\_\_\_\_ BHP / NHP. This License remains valid until the validity of your Master Class 2 / Engine Driver Class 1 Certificate of Competency detailed above.

Date:- .....

Place:- .....

Name and Signature of Chief Examiner

**FORM NO. 27****(Rule 4.10)****Application Form for Revalidation of Certificate of Competency**

APPLICATION FOR REVALIDATION CERTIFICATE OF COMPETENCY TO AT AS  
ENGINEER / ENGINE DRIVER / SERANG / MASTER OF AN INLAND  
MECHANICALLY PROPELLED VESSEL.

Note:- The applicant shall submit this form duly filled in along with the necessary certificates  
/ document to the issuing authority for revalidation of certificate of competency.

**PART – A**

## Personal particulars

- |     |                   |    |
|-----|-------------------|----|
| (1) | Name in full      | :- |
| (2) | Surname           | :- |
| (3) | Nationality       | :- |
| (4) | Permanent Address | :- |
|     |                   | :- |
|     |                   | :- |
| (5) | Date of birth     | :- |
| (6) | Place of birth    | :- |

Passport size  
photograph of the  
applicant

**PART – B**

## Particulars of the certificate to be revalidated

- |     |   |    |
|-----|---|----|
| (1) | Number  | :- |
| (2) | Competency of service   | :- |
| (3) | Grade   | :- |
| (4) | Where issued  | :- |
| (5) | Date of issue   | :- |
| (6) | Is the certificate at any time suspended or cancelled by court or authority (if yes<br>provide details) ..... |    |
|     | .....   |    |

**PART – C**

Please tick the condition of revalidation being complied with by the applicant seeking revalidation.

- (1) Minimum service of 1 year in last 5 years on an inland vessel as described in section 4.10.1 of these rules.
- (2) Minimum service of 1 year in last 10 years on an inland vessel & successfully completed the preparatory course for grant of applicable grade of Certificate of Competency as described in section 4.10.2 of these rules.
- (3) Successfully completed the preparatory course for grant of applicable grade Certificate of Competency and to appear in oral examination as described in section 4.10.3 of these rules.

**PART – D**

- (1) Details of Service on Inland Vessels in last 5 / 10 years (delete the inapplicable)

| Sr. No. | Vessel Name | Vessel Identification / Official No. | Vessel BHP | Rank | From | To | Period |
|---------|-------------|--------------------------------------|------------|------|------|----|--------|
|         |             |                                      |            |      |      |    |        |

- (2) Details of Preparatory Course Attended (if applicable)

Preparatory Course Grade:- \_\_\_\_\_ Institute:- \_\_\_\_\_

From:- \_\_\_\_\_ To:- \_\_\_\_\_

Preparatory Course Certificate No. \_\_\_\_\_ Dated:- \_\_\_\_\_

**PART – E****DECLARATION**

I do hereby declare that the particulars contained in Part A, B, C, D & E of this form are correct and true to the best of my knowledge and belief, and that the papers attached / sent with this form are true and genuine documents, given and signed by the persons whose names appear on them.

Date:- .....

Signature of the Applicant

Present Address:- .....

.....

## PART – F

## CERTIFICATE OF THE EXAMINER

The declaration under Part – E above was signed in my presence and the fee of Rs.....  
received.

Date:-

Examiner

## PART – G

## CERTIFICATE OF THE EXAMINER

Note:- The examiner should fill up Part – G and H and forward this form to the Chief Examiner along with the testimonials and other certificates.

1. Date and place of Assessment of documents submitted.
2. Passed or failed in Oral Examination (if applicable)
3. Revalidation of Certificate No. \_\_\_\_\_, Grade \_\_\_\_\_ recommended / not recommended (in case of not recommended cases, please state reasons)

## PART – H

## PERSONAL DESCRIPTION OF APPLICANT

1. Height:-  
Meters \_\_\_\_\_ Centimeters \_\_\_\_\_
2. Complexion:- \_\_\_\_\_
3. Personal marks or peculiarities, if any, \_\_\_\_\_
4. Color of (a) Hair:- \_\_\_\_\_  
(b) Eyes:- \_\_\_\_\_

I hereby certify that the particulars contained in Part – G and Part – H are correct.

Date:- .....

Place:- .....

Name and signature of examiner

By order and in the name of the Governor of Gujarat,

**PRAKASH MAJMUDAR,**

Deputy Secretary to Government

-----

Government Central Press, Gandhinagar





सत्यमेव जयते

# The Gujarat Government Gazette

## EXTRAORDINARY

PUBLISHED BY AUTHORITY

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Separate paging is given to this Part in order that it may be filed as a Separate Compilation.

### PART IV-A

Rules and Orders (Other than those published in Parts I, I-A, and I-L) made  
by the Government of Gujarat under the Central Acts

#### LEGAL DEPARTMENT

#### Notification

Sachivalaya, Gandhinagar, 30<sup>th</sup> July, 2018.

#### Code of Criminal Procedure, 1973.

**No.GK/28/2018/PRCH/102012/UOR-193/D** :- In exercise of the powers conferred by the proviso to sub-section (1) of section 11 of the Code of Criminal Procedure, 1973 (2 of 1974) in its application to the State of Gujarat, the Government of Gujarat, in consultation with the High Court of Gujarat, hereby establishes a court of Civil Judge and Judicial Magistrate of First Class for the area of the City of Bhavnagar, to ordinarily work as a Mobile Court for speedy disposal of health and sanitation cases under the Gujarat Provincial Municipal Corporations Act, 1949 (Bom. LIX of 1949), with effect on and from, the 1<sup>st</sup> August, 2018.

By order and in the name of the Governor of Gujarat,

**H. H. VARMA,**

Deputy Secretary to Government.

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# The Gujarat Government Gazette

## EXTRAORDINARY

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### PART IV-A

Rules and Orders (Other than those published in Parts I, I-A, and I-L) made  
by the Government of Gujarat under the Central Acts

#### FOOD, CIVIL SUPPLIES AND CONSUMER AFFAIRS DEPARTMENT NOTIFICATION

Sachivalaya, Gandhinagar, 6<sup>th</sup> August, 2018.

#### National Food Security Act, 2013.

**No. GTH/2018/20/PDS/102018/437/C-1:-** WHEREAS certain draft rules were published as required by clause (i) of sub-section (2) of section 40 read with sub-section (1) of section 28 of the National Food Security Act, 2013 (20 of 2013) at pages 42-1 to 42-4 in the Gujarat Government Gazette Extraordinary part IV-A dated 14th May, 2018, under the Government Notification Food, Civil Supplies And Consumer Affairs Department, No. GTH/2018/15/PDS/102017/437/C-1, inviting objections or suggestions from all persons likely to be affected thereby within a period of thirty days from the date of publication of this notification in the official Gazette.

NOW, WHEREAS, no objections or suggestions have been received from the public on the said draft rules;

NOW, THEREFORE, In exercise of the powers conferred by clause (i) of sub-section (2) of section 40 read with sub-section (1) of section 28 of the National Food Security Act, 2013 (20 of 2013), the Government of Gujarat hereby makes the following rules, namely :-

#### 1. Short title and commencement.-

- (1) These rules may be called the Gujarat Social Audit (Fair Price Shops and Targeted Public Distribution System) Rules, 2018.
- (2) They shall come into force on the date of their publication in the Official Gazette.

**2. Definitions.-**

- (1) In these rules, unless the context otherwise requires,-
  - (a) “Act” means the National Food Security Act, 2013 (20 of 2013);
  - (b) “Commission” means the Gujarat State Food Commission;
  - (c) “Government” means the Government of Gujarat;
  - (d) “Gram Sabha” means gram sabha as defined under clause (33) of section 2 of the Gujarat Panchayats Act, 1993;
  - (e) “Ordinary General Meetings of Municipality” means meetings as provided under section 51 of the Gujarat Municipalities Act, 1963;
  - (f) “Section” means section of the Act;
  - (g) “Wards committee” means wards committee constituted under section 29A of the Gujarat Provincial Municipal Corporations Act, 1949.
- (2) Words and expressions used in these rules but not defined shall have the same meaning respectively assigned to them in the Act.

**3. Social Audit.-**

In order to ensure transparency in the implementation of Targeted Public Distribution System, the State Government shall make available all records to the general public. Following shall be the process for Social Audit:-

- (1) A simple and common format/questionnaires shall be devised by Director, Food and Civil Supplies which shall be provided to all participants of the concerned Gram Sabha, Ordinary General Meetings of Municipality/Wards committee, as the case may be, so that people can opine their views/grievances/suggestions on the following parameters:-
  - (i) Public display of the entire list of eligible households under National Food Security Act, 2013;
  - (ii) Updation in the list of beneficiaries;
  - (iii) Timely availability of adequate stock of food grains in the fair price shop;
  - (iv) Timely distribution of food grains by the concerned fair price shop dealer;
  - (v) Distribution of food grains to eligible households as per their entitlement under the Act;
  - (vi) Distribution of foodgrains to the eligible households at prices specified under the Act;
  - (vii) Regular and timely opening and closing of fair price shops;
  - (viii) Awareness about grievance redressal mechanism and their effectiveness in redressal of grievances;
  - (ix) Use of technology in beneficiaries authentication and proper targeting; and
  - (x) Any other parameters shall be included by the Collector as per the local situation of the City, Gram, Taluka, District levels.

- (2) All records related to allotment, permit register, sale register, stock register, storage and distribution of essential commodities under the Targeted Public Distribution System at Fair Price Shops shall be placed at Gram Sabha, Ordinary General Meetings of Municipality or as the case may be, Wards committee held at least once in six months for social audit.
  - (3) In rural areas, documents of intervening period between the Gram Sabhas as specified in sub rule (2) above shall be placed in Gram Sabha by Fair Price Shop owner and Supply Inspector in-charge for social audit.
  - (4) After audit of documents at Gram Sabha, the report alongwith recommendation shall be submitted to village level vigilance committee for examination. Then village level vigilance committee shall submit its reports to Taluka level vigilance committee. After examination by Taluka level vigilance committee, recommendation shall be forwarded to District level vigilance committee for further necessary action.
  - (5) (a) In urban areas, the Municipal Corporation shall facilitate convening of meeting of Wards committee and in Municipalities, the urban local body shall facilitate convening of meeting of Ordinary General Meetings of Municipality with agenda for conduct of social audit on the date fixed.  
(b) In the meeting convened as per above clause (a), documents of intervening period between the Ordinary General Meetings of Municipality, Wards Committee as specified in the sub rule (2) shall be placed in the Ordinary General Meetings of Municipality, Wards Committee as the case may be, by Fair Price Shop owners and designated Supply Officer/Supply Inspector in-charge of the social audit.
  - (6) After audit of documents at meeting of Ordinary General Meeting of Municipality, Wards Committee in urban areas, the report along with recommendation shall be submitted to the City level vigilance committee. After examination by the City level vigilance committee, recommendation shall be forwarded to District level vigilance committee for further necessary action.
  - (7) After compiling the social audit report of Fair Price Shops, necessary examination shall be made at district level and District Collector shall take further necessary action. Action taken on the social audit report shall be forwarded to Director, Food and Civil Supplies.
  - (8) Director, Food and Civil Supplies shall monitor and take actions on the social audit report and shall report to the Government and the Commission.
  - (9) The concerned District Collector shall publish the reports of the Social audit and action taken thereon, including placing the same on the PDS transparency portal.
4. The Director, Food and Civil Supplies shall devise online mechanism for social audit as early as possible.

By order and in the name of the Governor of Gujarat,

**NAYANA PATEL,**

Deputy Secretary to Government.

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# The Gujarat Government Gazette

## EXTRAORDINARY

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### PART IV-A

**Rules and Orders (Other than those published in Parts I, I-A, and I-L) made  
by the Government of Gujarat under the Central Acts**

**FOREST AND ENVIRONMENT DEPARTMENT,**

#### NOTIFICATION

Sachivalaya, Gandhinagar, 1<sup>st</sup> August, 2018.

#### Constitution of India.

**No.GVN/2018(09)/CRR/102016/116/D :-** In exercise of the powers conferred by the proviso to article 309 of the Constitution of India and in supersession of all the rules made in this behalf, the Governor of Gujarat hereby makes the following rules to provide for regulating recruitment to the post of Office Superintendent, Class II, in the General State Service, in the office of the Principal Chief Conservator of Forests, Gujarat State namely; -

1. These Rules may be called the Office Superintendent, Class II, in the office of the Principal Chief Conservator of Forests Recruitment Rules, 2018.
2. Appointment to the post of Office Superintendent, Class II, in the General State Service, in the office of the Principal Chief Conservator of Forests, Gujarat State, shall be made either,-
  - (a) by promotion of a person of proved merit and efficiency from amongst the persons, who,-
    - i. have worked for not less than seven years in the cadre of Head Clerk, Class III in the subordinate service of the Principal Chief Conservator of Forests, Gujarat State;
    - ii. have passed the prescribed departmental examination for promotion to the post of Office Superintendent, Class II, as may be prescribed by the Government; and
    - iii. have passed the qualifying examination for computer knowledge in accordance with the provisions of the Gujarat Civil Services Computer Competency Training and Examination Rules, 2006:

Provided that, where the appointing authority is satisfied that a person having an experience specified in sub-clause (i) above is not available for promotion and that it is necessary in the public interest to fill up the post by promotion even of a person having experience for a lesser period; it may, for reasons to be recorded in writing, promote such person who possesses experience of a period of not less than two-thirds of the period specified in sub-clause (i) above; or

(b) by direct selection.

3. To be eligible for appointment by direct selection to the post mentioned in rule 2, a candidate shall, -

(a) not be more than 40 years of age:

Provided that the upper age limit may be relaxed in favour of a candidate who is already in the service of the Government of Gujarat in accordance with the provisions of the Gujarat Civil Services Classification and Recruitment (General) Rules, 1967:

Provided further that nothing contained in clause (b) of sub-rule (9) of rule 8 of the Gujarat Civil Services Classification and Recruitment (General) Rules, 1967 shall be applicable in so far as relaxation of upper age limit as prescribed above is concerned;

(b) possess a graduate degree obtained from any of the Universities established or incorporated by or under the Central or a State Act in India; or any other educational institution recognised as such or declared to be a deemed as a University under section 3 of the University Grants Commission Act, 1956; or possess an equivalent qualification recognized by the Government;

(c) (i) have about five years experience on the post not below the rank of Senior Clerk, Class III, in the subordinate service of the Principal Chief Conservator of Forests, in the Forest and Environment Department, Gujarat State, or

(ii) have about five years experience of administration in Government, Government Undertaking, Board, Corporation or Limited Company established under the Companies Act, 2013 on the post which can be considered equivalent to the post not below the rank of Senior Clerk, Class III, in the subordinate service of the Principal Chief Conservator of Forests, in the Forest and Environment Department, Gujarat State;

(d) possess the basic knowledge of computer application as prescribed in the Gujarat Civil Services Classification and Recruitment (General) Rules, 1967; and

(e) possess adequate knowledge of Gujarati or Hindi or both.

4. The candidate appointed by direct selection shall be on probation for a period of two years.

5. The candidate appointed by direct selection, during his probation period, shall be required to undergo pre-service training and to pass the post-training examination in accordance with the provisions of the Gazetted Officers' Pre-service Training and Examination Rules, 1970.

6. The candidate appointed by direct selection, during his probation period, shall be required to pass the qualifying examination for computer knowledge in accordance with the provisions of the Gujarat Civil Services Computer Competency Training and Examination Rules, 2006.

7. The candidate appointed by direct selection shall be required to pass the departmental examination as may be prescribed by the Government.

8. The candidate appointed either by promotion or by direct selection shall be required to undergo such training and to pass such examination as may be prescribed by the Government.

9. The candidate appointed by direct selection shall be required to furnish a security and surety bond in such form, for such amount and for such period as may be prescribed by the Government.

By order and in the name of the Governor of Gujarat,

**GAGUBHA RAJ,**

Under Secretary to Government.

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### PART IV-A

Rule and Orders (Other than those published in Parts I, I-A, and I-L) made  
by the Government of Gujarat under the Central Acts

#### HOME DEPARTMENT (SPECIAL-3)

#### NOTIFICATION

Sachivalaya, Gandhinagar, 8<sup>th</sup> August, 2018.

#### THE PREVENTION OF ILLICIT TRAFFIC IN NARCOTIC DRUGS AND PSYCHOTROPIC SUBSTANCES ACT, 1988.

**No.GG/66/SB-III/PITNDPSA/2018/01:-** In exercise of the powers conferred by section 3 of the Prevention of Illicit Traffic in Narcotic Drugs and Psychotropic Substances Act, 1988 (46 of 1988), The Government of Gujarat hereby empowers the Director General of Police/Additional Director General of Police (C.I.D. Crime and Railways) for making an order of detention of person engaging in illicit traffic in narcotics drugs and psychotropic substances.

By order and in the name of the Governor of Gujarat,

**PANKAJ DAVE,**

Under Secretary to Government.

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# The Gujarat Government Gazette

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### PART IV-A

Rule and Orders (Other than those published in Parts I, I-A, and I-L) made  
by the Government of Gujarat under the Central Acts

વન અને પર્યાવરણ વિભાગ

સુધારા જાહેરનામું

સચિવાલય, ગાંધીનગર, \* શ્રાવણ ૧૮ સ્ક-૨૦૧૮

સૌરાષ્ટ્ર વૃક્ષ છેદન (શિક્ષા કરવી) અધિનિયમ, ૧૯૫૧

ક+શ્ર% ૧૯૫૧/૨૨/અસાધ્યપીએએન/૨૦૧૪/૫૧/૭૮૫૧ % સૌરાષ્ટ્ર વૃક્ષ છેદન (શિક્ષા કરવા બાબત) અધિનિયમ ૧૯૫૧ ની કલમ ૨ ના ખંડ (ગ)થી મળેલી સત્તાની રૂએ, અને વન અને પર્યાવરણ વિભાગના તા.૨૦/૧૦/૨૦૧૫ના ગુજરાત સરકારના સુધારા જાહેરનામા નં: ઘ/શ/૨૨/અસાધ્યપીએએન/૨૦૧૪/૫૧/૭૮૫૧થી પ્રસિધ્ધ કરેલ વન સિવાયની / ખાનગી જમીન પર વૃક્ષો કાપવા અને સ્થળાંતર પરમીલમાંથી મુક્તિ અપાયેલ વૃક્ષોની યાદી, “યાદી-ટ” +શ્રકશ્ર-૮૮ પર “યાદી-ટ” +શ્રક+શ્ર%૮૩ અને ૮૪માં દર્શાવ્યા ઉપરાંત વાંસની અન્ય તમામ પ્રજાતિ” નો સમાવેશ કરવામાં આવે છે

ગુજરાતના રાજ્યપાલશ્રી હુકમથી અને તેમના નામે,

પ્રદીપ સિંહ,

સરકારના સંયુક્ત શ્રક્ષક.





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# The Gujarat Government Gazette

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### PART IV-A

Rules and Orders (Other than those published in Parts I, I-A, and I-L) made  
by the Government of Gujarat under the Central Acts

#### LEGAL DEPARTMENT

#### Notification

Sachivalaya, Gandhinagar, 14<sup>th</sup> August, 2018.

#### Wakf Act, 1995.

No.GK/ 29 /HCC/102016/11/628/E:- In exercise of the powers conferred by the section 14 of the Wakf Act, 1995 (43 of 1995) and Wakf (Amendment) Act, 2013 (27 of 2013) the Government of Gujarat hereby appoints the following person as the member of the Gujarat State Wakf Board.

| Sr. No. | Name  | Address  |
|---------|---|--|
| 1.      | Shri I. M. Qureshi<br>Joint secretary,<br>Health and Family welfare Department,<br>Sachivalaya, Gandhinagar | 530, Sodagar Pole, Raikhad Ward,<br>Ahmedabad-1. |

By order and in the name of the Governor of Gujarat,

**I. J. VORA,**  
Secretary to Government.

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## PART IV-A

**Rules and Orders (Other than those published in Parts I, I-A, and I-L) made  
by the Government of Gujarat under the Central Acts**

**FOOD, CIVIL SUPPLIES AND CONSUMER AFFAIRS DEPARTMENT**

### NOTIFICATION

Sachivalaya, Gandhinagar, 18<sup>th</sup> August, 2018.

#### National Food Security Act, 2013.

**No. GTH/2018/22/PDS/10.2016/221/C-1 :-** The following draft of rules which is proposed to be issued under clause (f) of sub-section (2) of section 40 read with sub-section (5) of section 16 of the National Food Security Act, 2013 (20 of 2013), is hereby published as required by sub-section (1) of section 40 of the aforesaid Act, for information of all persons likely to be affected thereby and notice is hereby given that the said draft rules will be taken into consideration by the Government of Gujarat on or after the expiry of thirty days from the date of publication of this notification in the *Official Gazette*.

2. Any objection or suggestion which may be received by the Principal Secretary to Government of Gujarat, Food, Civil Supplies and Consumer Affairs Department, Block No.14, 5<sup>th</sup> floor, Sachivalaya, Gandhinagar-382010 from any person with respect to the said draft rules on or before the expiry of the aforesaid period will be considered by the Government.

#### DRAFT NOTIFICATION

**No. GTH/2018/22/PDS/10.2016/221/C-1 :-** In exercise of the powers conferred by clause (f) of sub-section (2) of section 40 read with sub-section (5) of section 16 of the National Food Security Act, 2013 (20 of 2013), the Government of Gujarat hereby makes the following rules, further to amend the Gujarat State Food Commission (Procedure for Appointment of Chairperson, Members and staff and conditions of service) Rules, 2017 namely :-

1. These rules may be called the Gujarat State Food Commission (Procedure for Appointment of Chairperson, Members and staff and conditions of service) (Amendment) Rules, 2018.
2. In the Gujarat State Food Commission (Procedure for Appointment of Chairperson, Members and staff and conditions of service) Rules, 2017, in rule 4, in sub-rule (1), in clause (b), for the word "Secretary", the words "Deputy Secretary" shall be substituted.

By order and in the name of the Governor of Gujarat,

**NAYANA PATEL,**

Deputy Secretary to Government.



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# The Gujarat Government Gazette

## EXTRAORDINARY

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### PART IV-A

Rules and Orders (Other than those published in Parts I, I-A, and I-L) made  
by the Government of Gujarat under the Central Acts

#### LEGAL DEPARTMENT

#### Notification

Sachivalaya, Gandhinagar, 21<sup>st</sup> August, 2018.

#### The Commissions of Inquiry Act, 1952.

**NO.GK/30/2018/COI/102018/121/A.- WHEREAS** in the year 2017-18, NAFED has purchased groundnuts from farmers through various State Level Agencies as per Union Government Scheme for purchasing agricultural produce at Minimum Support Price (MSP/*Teka Na Bhav*) and kept the same in various godowns:

**AND WHEREAS**, amongst those godowns, four godowns that is, (1) Sanghvi Industries Godown at Kidana, Ta-Gandhidham, Dist. Kutch, (2) Ram Rajya Kotex Pvt. Ltd., Gondal, Ta-Gondal, Dist. Rajkot, (3) Central Warehouse Corporation, Hapa, Dist. Jamnagar, (4) National Cotton Industries Godown, Shapar-Veraval, Ta- Kotda-Sangani Dist. Rajkot, caught fire;

**AND WHEREAS**, the incidents of fire at the said godowns are being investigated but no conclusive reason for such fire could be found and no responsibility for the said incidents of fire could be fixed till date;

**AND WHEREAS**, under the said Union Government Scheme, commodities are being procured at the MSP by NAFED, which is a nodal agency appointed by the Central Government, from the state farmers and stored in the state geographical area, and therefore, the above referred incidents taking place in the State are detrimental to the said Scheme being implemented since long;

**AND WHEREAS** it is necessary to retain credibility of the process in the implementation of the Union Government Scheme in the State and that therefore, the Government of Gujarat is of the opinion that it is necessary to appoint a Commission of Inquiry for the purpose of making inquiry into the incidents of fire at the four godowns situated within the State and to fix responsibilities for the said incidents, being the matter of definite public importance.

**NOW, THEREFORE,** in the exercise of the powers conferred by Section 3 of the Commissions of Inquiry Act, 1952 (60 of 1952), the Government of Gujarat hereby appoints a Commission of Inquiry consisting of Hon'ble Mr. Justice H.K.Rathod, former Judge of the High Court of Gujarat.

2. The terms of reference of the Commission shall be -

To inquire into the incidents of fire, which took place in four godowns, that is (1) Sanghvi Industries Godown at Kidana, Ta-Gandhidham, Dist. Kutch, (2) Ram Rajya Kotex Pvt. Ltd., Gondal, Ta-Gondal, Dist. Rajkot, (3) Central Warehouse Corporation, Hapa, Dist. Jamnagar, (4) National Cotton Industries Godown, Shapar-Veraval, Ta- Kotda-Sangani, Dist. Rajkot, in order to find out the reasons for the same and to fix the responsibility for the said incidents.

3. The Commission shall submit its report to the Government of Gujarat as soon as possible, but not later than six months from the date of its first sitting.

4. The headquarters of the Commission shall be at Ahmedabad.

5. The Government of Gujarat is of the opinion that having regard to the nature of inquiry to be made by the Commission and other circumstances of the said events, all the provisions of sub-section (2), sub-section (3), sub-section (4) and sub-section (5) of Section 5 of the Commissions of Inquiry Act shall be made applicable to the Commission hereby appointed and the Government of Gujarat in exercise of the power conferred by sub-section (1) of said Section 5, hereby directs that all the provisions of the said sub sections (2) to (5) of the said Section 5 shall apply to the Commission.

By order and in the name of the Governor of Gujarat,

**H. R. SHAH,**  
Deputy Secretary to Government,  
Legal Department

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# The Gujarat Government Gazette

## EXTRAORDINARY

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#### PART IV-A

Rule and Orders (Other than those published in Parts I, I-A, and I-L) made  
by the Government of Gujarat under the Central Acts

#### HOME DEPARTMENT

#### NOTIFICATION

Sachivalaya, Gandhinagar, 28<sup>th</sup> August, 2018.

#### The Manoeuvres field firing and Artillery practice Act, 1938.

**No.GG/69/2018/FAP-172000/2833/P.F./M.:-** The state Government vide earlier Notification No-GG/22/2017/FAP-172000/2833/P.F./M dated-21/6/2017 has published notice of its intention to define and authorize the area specified therein as the area for carrying out Field Firing and Artillery Practice for the period of 5 (five) years i.e. from issued date (21/6/2017) of the said Notification. No objection or suggestions have been received from any person in this regards within 2 (two) months from the date of publication of the said Notification. After scrutiny due to difference in area of Survey No.750 and 751 shown in the letter dated-23/08/2017 by the Range Forest Officer Dwarka, the Objection/ submission was raised and resultantly, the District Magistrate re-scrutinized it and vide his letter No.-DM/Maji/Vashi/1641/2018 dated 31/07/2018, informed that on conducting a re-survey, difference was found in survey No.750. The actual area is now 32-42-34 hectare instead of 32-55-34 hectare and there is no difference in survey No.751. Therefore now in exercise of the powers conferred by sub-section (1) & (2) of section 9 of the Manoeuvres Field Firing and Artillery Practice Act, 1938 (V of 1938) the Government of Gujarat hereby defines and authorize Military Authorities to carry out Field Firing and Artillery Practice with live ammunition in the area specified in the Notification No- GG/22/2017/FAP-172000/2833/P.F./M dated 21/6/2017 and the revises data specified as under for the period from dated 21/6/2017 to dated 20/6/2022.

| Name of Taluka | Name of Village | Survey/block No. |            | Approximate Areas |          |           |
|----------------|-----------------|------------------|------------|-------------------|----------|-----------|
| 1.             | 2.              | 3.               |            | 4                 | 5        | 6         |
|                |                 | <u>Old</u>       | <u>New</u> | <u>H</u>          | <u>R</u> | <u>SH</u> |
| Dwarka         | Okha madhi      | 84               | 32         | 0                 | 73       | 73        |
| Dwarka         | Okha madhi      | 97               | 87         | 4                 | 30       | 73        |
| Dwarka         | Okha madhi      | 105              | 41         | 1                 | 45       | 75        |
| Dwarka         | Okha madhi      | 117              | 91         | 0                 | 22       | 26        |
| Dwarka         | Okha madhi      | 119              | 88         | 0                 | 51       | 59        |
| Dwarka         | Okha madhi      | 124              | 132        | 1                 | 34       | 43        |
| Dwarka         | Okha madhi      | 126              | 112        | 0                 | 45       | 17        |

| Name of Taluka | Name of Village | Survey/block No. |      | Approximate Areas |    |    |
|----------------|-----------------|------------------|------|-------------------|----|----|
| 1.             | 2.              | 3.               |      | 4                 | 5  | 6  |
|                |                 | Old              | New  | H                 | R  | SH |
| Dwarka         | Okha madhi      | 127              | 110  | 0                 | 66 | 99 |
| Dwarka         | Okha madhi      | -                | 9004 | 5                 | 63 | 19 |
| Dwarka         | Okha madhi      | -                | 9005 | 2                 | 35 | 06 |
| Dwarka         | Okha madhi      | 108p1            | 46   | 2                 | 31 | 89 |
| Dwarka         | Okha madhi      |                  | 131p | 85                | 59 | 09 |
| Dwarka         | Okha madhi      | 131 p11          | 197  | 99                | 82 | 49 |
| Dwarka         | Kuranga         | 11               | 113  | 0                 | 54 | 71 |
| Dwarka         | Kuranga         | 13               | 115  | 0                 | 07 | 14 |
| Dwarka         | Kuranga         | 15               | 129  | 0                 | 30 | 93 |
| Dwarka         | Kuranga         | 21               | 106  | 01                | 37 | 33 |
| Dwarka         | Kuranga         | 23               | 104  | 0                 | 23 | 78 |
| Dwarka         | Kuranga         | 24               | 102  | 0                 | 33 | 31 |
| Dwarka         | Kuranga         | 25               | 103  | 0                 | 38 | 06 |
| Dwarka         | Kuranga         | 47               | 95   | 0                 | 33 | 38 |
| Dwarka         | Kuranga         | 60               | 69   | 0                 | 47 | 58 |
| Dwarka         | Kuranga         | 66               | 88   | 2                 | 61 | 62 |
| Dwarka         | Kuranga         | 79               | 147  | 3                 | 09 | 18 |
| Dwarka         | Kuranga         | 82               | 143  | 0                 | 47 | 57 |
| Dwarka         | Kuranga         | 85               | 132  | 0                 | 48 | 85 |
| Dwarka         | Kuranga         | 86               | 133  | 0                 | 36 | 86 |
| Dwarka         | Kuranga         | 99               | 160  | 8                 | 85 | 92 |
| Dwarka         | Kuranga         | 106              | 174  | 15                | 64 | 93 |
| Dwarka         | Kuranga         | 112 p1           | 197  | 0                 | 16 | 00 |
| Dwarka         | Kuranga         | 115              | 195  | 1                 | 31 | 38 |
| Dwarka         | Kuranga         | 384 p1           | 146  | 47                | 68 | 54 |
| Dwarka         | Kuranga         | 404              | 109  | 2                 | 57 | 57 |
| Dwarka         | Kuranga         | 125/1            | 122  | 15                | 21 | 76 |
| Dwarka         | Kuranga         | 125/2            | 167  | 2                 | 02 | 90 |
| Dwarka         | Kuranga         | 134/2            | 112  | 0                 | 22 | 59 |
| Dwarka         | Kuranga         | 92 p2            | 139  | 01                | 68 | 84 |
| Dwarka         | Kuranga         |                  | 728  | 16                | 14 | 32 |
| Dwarka         | Kuranga         |                  | 727  | 36                | 30 | 60 |
| Dwarka         | Kuranga         | 110 p1           | 750  | 32                | 42 | 34 |
| Dwarka         | Kuranga         | 110 p2           | 751  | 250               | 53 | 82 |
| Dwarka         | Kuranga         | Area of Sea      |      | 179               | 06 | 84 |

2. Now, in accordance with the proposal from District Magistrate Devbhumi-Dwarka, dated 31/07/2018 and time to time, looking to the positive opinion from the District Magistrate, Devbhumi-Dwarka, the Government of Gujarat hereby further authorizes the army authorities to carry out field Firing and Artillery Practice at the above mentioned area for further 05 years from 21/6/2017 to 20/6/2022.
3. Other terms and conditions as mentioned in the above cited Notification of even number dated 21/6/17, will remain the same.

By order and in the name of the Governor of Gujarat,

**K. D. SUTHAR,**

Joint Secretary to Government.

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# The Gujarat Government Gazette

## EXTRAORDINARY

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Separate paging is given to this Part in order that it may be filed as a Separate Compilation.

### PART IV-A

Rule and Orders (Other than those published in Parts I, I-A, and I-L) made  
by the Government of Gujarat under the Central Acts

#### PORTS AND TRANSPORT DEPARTMENT

##### Notification

Sachivalaya, Gandhinagar, 30<sup>th</sup> August, 2018

#### MOTOR VEHICLES ACT, 1988.

**No.PT/2018/15/MVD/102016/742/KH:-** The following draft of notification which is proposed to be issued under sub-section (1) of section 93 read with clause (xxviii) of sub section (2) of section 96 of the Motor Vehicles Act, 1988 (59 of 1988), is hereby published as required by sub-section (1) of section 212 of the said Act for information of all persons likely to be affected thereby and notice is hereby given that the said draft rules will be taken into consideration by the Government of Gujarat on or after the expiry of thirty days from the date of publication of this notification in the *Official Gazette*.

2. Any objection or suggestion which may be received by the Principal Secretary (Transport), Ports and Transport Department, Sachivalaya, Gandhinagar from any person with respect to the said draft rules on or before the expiry of the aforesaid period, will be considered by the Government.

#### DRAFT NOTIFICATION

#### MOTOR VEHICLES ACT, 1988.

**No.PT/2018/15/MVD/102016/742/KH :-** In exercise of the powers conferred by sub section (1) of section 93 read with clause (xxviii) of sub-section (2) of section 96 of the Motor Vehicles Act, 1988 (59 of 1988), the Government of Gujarat hereby makes the following rules, namely:-

##### 1. Short title and extent.-

- (i) These rules may be called the Gujarat State on Demand Transportation Aggregator Rules, 2018.
- (ii) It shall be applicable to the aggregators operating in the State of Gujarat.

**2. Definitions.-** in these rules, unless the context otherwise requires, -

- (a) "Act" means the Motor Vehicles Act, 1988 (59 of 1988);
- (b) "Aggregator" means a person who is an aggregator or an operator or an intermediary/market place who canvasses or solicits or facilitates passenger for travel by a taxi and who connects the passenger/intending passenger for travel through phone calls, internet, web-based services or GPS/GPRS based services through mobile phone application whether or not any fare, fee, commission, brokerage or other charges are collected for providing such services;
- (c) "GPS" includes a navigational system using satellite signals to fix the location of a radio receiver on or above the earth's surface;
- (d) "GPRS" includes General Packet Radio Service is a packet-switching technology that enables data transfers through cellular networks;
- (e) "license" means a License issued to an aggregator under these rules;
- (f) "licensee" means an aggregator who holds license issued under these rules;
- (g) "Licensing Authority" means a Regional Transport Authority of the region in which the applicant intends to carry on the business, and in any other case, of the region in which the applicant has his principal place of business;
- (h) "Taxi" means a motor cab having a seating capacity not exceeding six passengers including the driver with public service permit on contract.

**3. Limit for license.-**The aggregator shall not attach more than 20,000 vehicles under one license and only one license shall be issued to a company or an aggregator.

**4. Necessity for License-** No person shall act as an aggregator unless he holds an effective license issued to him under these rules.

**5. Application for grant of license and matters connected therewith.-**

- (i) Any person may make an application in Form-I for grant of license accompanied by proof of payment of appropriate fee as prescribed in rule 14 and other security deposit as prescribed in rule 15 of these rules.
- (ii) A license granted under these rules shall be valid for a period of five years from the date of issue.
- (iii) A license granted under these rules may be renewed for a period of five years on an application made not later than sixty days prior to the date of its expiry, subject to fulfillment of all the conditions prescribed in these rules.
- (iv) If any of the conditions prescribed under these rules for grant or renewal of license is not complied with by the applicant, the Licensing Authority may reject such application after giving an opportunity of being heard.
- (v) On being satisfied that the applicant has complied with all the conditions prescribed for grant or renewal of the license under these rules, the Licensing Authority shall issue a license in Form II of Appendix -1 appended to these rules or renew the same, as the case may be.
- (vi) Where the license is lost or destroyed, an application for issue of duplicate license shall be made along with the fees as prescribed in rule 14. A duplicate license so issued shall be marked as "duplicate" in red ink.

**6. Profile of Aggregator.-**

- (i) The applicant may be a firm, LLP, Company, Association of Persons, etc.;



- (ii) The applicant shall comply with all applicable rules and regulations made under the Act and also the Information Technology Act, 2000 including intermediary guidelines; and
- (iii) The applicant shall not own or lease any vehicle, employ any driver or represent himself as a taxi service provider, unless he holds the license issued under these rules.

**7. Conditions for grant or renewal of license.-**

The applicant for seeking a license shall satisfy that he -

- (i) has a fleet of minimum 50 taxies either owned or through an agreement with individual taxi permit holders; and
- (ii) has facilities for monitoring the movement of taxies with the help of in built GPS/GPRS based vehicle locating devices which are capable of calculating fare using already established process, display the fare through display panel, printing of the receipt and authenticate the driver using biometrics through one single unit.

**8. Vehicle Profile.-** Every taxi for the purpose of inclusion in a license shall -

- (i) be covered with a contract carriage permit issued in accordance with the provisions under chapter V of the Act;
- (ii) have a display board inside the taxi containing the vehicle permit and driver's details such as photograph, name, driving license number and public service badge and ID card issued by the police authorities. The display board shall be clearly visible to the passenger in the taxi;
- (iii) be capable of being tracked continuously by using GPS / GPRS based facility in such a way that the device shall be securely fixed to the vehicle with a provision of a panic button for the use of passengers, capable of alerting the control room without any hindrance or interference by the driver. This device shall be a single unit that would be capable of calculating fare through an electronic digital fare meter, capable of generating a printed receipt to be given to the passenger, a display board to display the route taken by the taxi, a biometric module to authenticate the driver.
- (iv) be equipped with the electronic digital fare meter complying the provisions of the Standards of Weights and Measures Act, 1976.

**9. Driver's qualification.-** Driver of a taxi shall have the following qualifications.-

- (i) he shall be holder of a license to drive light motor vehicles (transport) and the holder of a badge to drive motor cabs;
- (ii) he shall have a minimum driving experience of two years;
- (iii) he shall have knowledge of Gujarati, Hindi and any other additional language, preferably English;
- (iv) he shall have a KYC compliant bank account; and
- (v) he shall be of good moral character and without any criminal record.

**10. Hire charges.-**

- (i) The driver or the aggregator shall collect hire charges from the passengers as per the fare indicated in the meter.
- (ii) No passenger shall be charged for dead mileage or dry run of the vehicle. The fare charged shall be from the point of hire to the drop point of the passenger.

(**Explanation** : Dead Mileage or Dry run means distance travelled by Taxi for the purpose of picking up the Passenger in reference to his call to the Aggregator.)

**11. General conditions to be observed by licensee.** The licensee shall —

- (i) provide an address within area of operation in the jurisdiction of the licensing authority alongwith details of the officer in charge of the affairs;
- (ii) neither shift his place of business, nor any of his branches as mentioned in the license or open a new branch without a written permission from the Licensing Authority;
- (iii) maintain records, in digital format of all the taxies at his control, indicating on a day to day basis, the trips operated by each vehicles, details of passengers who traveled in the vehicles and the records so maintained shall be open for inspection by an officer nominated by the Licensing Authority at any time;
- (iv) provide a list of drivers, their license numbers, the vehicle registration number, the chassis and engine numbers and permit details of taxis operated by him to the Licensing Authority on a quarterly basis;
- (v) maintain the copies of following up-dated records relating to the drivers (after verification with the originals):
  - (a) Photograph of the driver;
  - (b) Driving license;
  - (c) Proof of present residential address;
  - (d) KYC compliant bank account details;
  - (e) Self-attested copies of Voter ID, AADHAAR and PAN Card; and
  - (f) Contact details of two family members;
- (vi) maintain the copies of the following up-dated records relating to the drivers and vehicles (after verification with the originals):
  - (a) Driving License, Authorization and badge;
  - (b) ID Proof, Residential address;
  - (c) Certificate of Registration;
  - (d) Certificate of Fitness;
  - (e) Permit of the vehicle;
  - (f) Chassis and engine numbers;
  - (g) Commercial insurance policy covering for third party risks as per the provisions of the Act;
  - (h) Pollution under Control Certificate.
- (vii) implement a zero tolerance policy on the use of drugs or alcohol or harassment to the Women applicable to any driver, provide notice of the zero tolerance policy on its website, as well as the procedure to report a complaint about a driver when a passenger reasonably suspects that the driver was under the influence of drugs or alcohol during the course of the ride and the licensee shall immediately deactivate or suspend such drivers of access to the platform upon receipt of a passenger's complaint alleging violation of the zero tolerance policy. The suspension shall last or continue during the period of the investigation by the licensee;

- (viii) ensure that the antecedents of every driver of a taxi is verified by the police authorities before the driver is allowed to use the license's plat form.
- (ix) arrange at least once in a year for structured refresher training programme for the drivers not only for safe driving skills but also for gender sensitization and etiquette towards passengers etc.:
- (x) periodically check and maintain a register regarding the details of all the documents of all taxies at his command;
- (xi) ensure that all taxies at his command maintain uninterrupted contact with the control room during the time of hire. The Control room shall be in a position to monitor the movements of all the vehicles at his command;
- (xii) ensure that the grievances or complaints of passengers or any other persons received by him shall be attended by the grievance officer appointed by him and they must be made available to the inspecting authorities on demand:
- (xiii) ensure that the taxies covered with a permit issued in accordance with Chapter V of the Act;
- (xiv) ensure that the service is available all the time (24 x 7) without any interruption;
- (xv) be allowed to put brand stickers on the vehicles and at the end of the license period or in the event of the termination of the license or agreement with the vehicle owners, brand stockers shall be removed;
- (xvi) also be allowed to advertise on the vehicles attached by him and earn revenue which shall be shared with the taxi owner;
- (xvii) ensure that the taxi fare shall not exceed four times to the basic fare; and
- (xviii) ensure that any owner of the existing taxi, either city taxi or other taxi, may aggregate his taxi with aggregator.

**(Explanation :** Basic Fare means the Minimum Fare fixed by the State Government from time to time.)

## **12. Powers of Licensing Authority.-**

- (i) The licensing authority may after giving an opportunity of being heard to the licensee, suspend the license for a period which shall not be less than 10 days and which shall not exceed 6 months at a time or may cancel the license if -
  - (a) the licensee fails to comply with any of the requirements or conditions of these rules; or
  - (b) any taxi operated by the licensee fails to comply with any of the requirements of conditions of these rules; or
  - (c) any driver of a taxi operated by the licensee violates any requirements or conditions of these rules; or
  - (d) a passenger complaint of misbehavior or misdemeanor on the part of the driver or the licensee or any of his employees is found to be correct after enquiry; or
  - (e) the aggregator is found to be charging fare other than [what is already] it is specified.

- (ii) Where the suspension of license of an aggregator under sub-rule (1) above has occurred two times, the licensing authority may cancel the licence.
- (iii) If Licensing Authority is satisfied that the license of an aggregator has been obtained on the basis of documents which were, or by representation of facts which was false, the Licensing Authority shall after giving the aggregator an opportunity to make representation by sending to the aggregator a notice by Registered Post Acknowledgement Due (RPAD) at his address entered in the license and for reasons to be recorded in writing cancel the license.
- (iv) Where any F.I.R. is lodged against the aggregator regarding any misconduct by which gratitude of women is disturbed, or sexual harassment to the women, after receiving a copy of the F.I.R. if found guilty, after giving an opportunity of being heard, the Licensing Authority, shall cancel the license.

### 13. Appeal. -

- (i) The licensee aggrieved by any order passed by the Licensing Authority may within a period of thirty days of receipt of the order, appeal to the Commissioner of Transport, Gujarat State.
- (ii) An appeal shall be in form of a memorandum in duplicate setting forth the grounds for the appeal and shall be accompanied by the requisite fee and the certified copy of the order passed by the Licensing Authority in this behalf.

### 14. Fees. - The fee in respect of a license shall be as follows:

| Sr. No. | Purpose  | Amount in Rupees |
|---------|--|------------------|
| 1       | Grant of License   | 10,00,000/-      |
| 2       | Renewal of License   | 5,00,000/-       |
| 3       | Endorsement of addition of a vehicle in the license for each vehicle | 1,000/-          |
| 4       | Issue of duplicate license   | 50,000/-         |
| 5       | Appeal   | 5,000/-          |

**15. Security deposits. -** An Applicant for a license under these rules shall furnish security by way of the bank guarantee to the extent as indicated below from any nationalized bank situated with jurisdiction of respective Regional Transport Authority.

| Sr. No. | Number of Taxies       | Amount in Rupees |
|---------|------------------------|------------------|
| 1       | Upto 1000 taxies       | 5,00,000/-       |
| 2       | Upto 10000 taxies      | 10,00,000/-      |
| 3       | More than 10000 taxies | 25,00,000/-      |

### 16. Electronic Digital fare meter in-built GPS, GPRS, Printer and biometric module.-

The vehicle shall be fitted securely with electronic digital fare meter with in-built GPS/GPRS based taxi fare meter capable of tracking the vehicle at all times of communicate with the control center during the time of hire, display the route traversed by the vehicle, display the fare, calculate the fare for the distance travelled, print the receipt of the fare and authenticate the driver of the vehicle using biometric module.

The specification of the electronic digital fare meter with in-built GPS, GPRS, Printer and bio-metric module shall be such as may be specified by the Commissioner of Transport, Gujarat State.

**APPENDIX-I**

**FORM-I**

[(See Rule 5(i)]

**Application for the grant/renewal of Aggregator's License Under The Gujarat On-demand Transportation Technology Aggregators Rules, 2018**

To,

The Secretary,

Regional Transport Authority,

.....

I, the undersigned hereby apply for grant/renewal of a License for operation as an Aggregator under The Gujarat On-demand Transportation Technology Aggregators Rules, 2018.

|    |  |  |
|----|--|--|
| 1  | Name in Full   |  |
| 2  | Address of the main office   |  |
| 3  | Number of branches and their addresses   |  |
| 4  | a) If a registered company, enclose a copy of certificate of incorporation/registration along with a copy of memorandum of association<br>b) If a firm, enclose a copy of certificate of registration of the firm<br>c) If the applicant is a LLP or Association of Persons, enclose a copy of certificates of that effect |  |
| 5  | Telephone number, web address and e-mail id  |  |
| 6  | Number of Taxies proposed to be operated. (Enclose a separate list containing vehicle number and permit particulars of each vehicle)   |  |
| 7  | Details of GPS/GPRS facility   |  |
| 8  | Details of other infrastructure  |  |
| 9  | Details of financial condition   |  |
| 10 | Details of fee paid  |  |
| 11 | Details of security Deposit by way of Bank Guarantee   |  |
| 12 | Details of Experience  |  |
| 13 | Details of APPs  |  |

I hereby declare that the information given above and other documents enclosed herewith are true to the best of my knowledge. I understand that if any information is found to be incorrect at any point of time, the License granted to me is liable to be cancelled, besides initiating other legal action/actions against me. I have gone through the provisions of The Gujarat On-demand

Transportation Technology Aggregators rules, 2018, I accept the same and agree to abide by the same.

Place:

Signature of the Applicant/

Date:

Authorized signatory

## FORM - II

[See Rule 5(ii)]

### License for an Aggregators

Mr/Ms/Mrs \_\_\_\_\_ is hereby licensed to function as an operator under the Gujarat On -demand Transportation Technology Aggregators Rules, 2018 subject to conditions contained in the Rules.

|   |  |  |
|---|--|--|
| 1 | Name of the Aggregators in full                                      |  |
| 2 | Address of the main office   |  |
| 3 | Addresses of branches  |  |
| 4 | Telephone number, web address and e-mail id                          |  |
| 5 | Number of Taxies (As per the list enclosed)                          |  |
| 6 | Particulars of the network through which the operator shall function |  |
| 7 | Details of fee paid  |  |
| 8 | Details of bank guarantee  |  |

The licensee shall observe all the conditions contained in the The Gujarat On -demand Transportation Technology Aggregators Rules, 2018

This license is valid from..... to .....

Place:

Secretary,

Date:

Regional Transport Authority.

By order and in the name of the Governor of Gujarat,

**PRAKASH MAJMUDAR,**  
Deputy Secretary to Government.

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## EXTRAORDINARY

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### PART IV-A

Rules and Orders (Other than those published in Parts I, I-A, and I-L) made  
by the Government of Gujarat under the Central Acts

#### LEGAL DEPARTMENT

#### Notification

Sachivalaya, Gandhinagar, 27<sup>th</sup> August, 2018.

#### Indian Christian Marriage Act, 1872

**No. GK/31/ICM/ 102015/3187/D :-** In the exercise of power conferred by section 6 and 9 of The Indian Christian Marriage Act, 1872(XV of 1872), the Government of Gujarat hereby grants license to Rev. Suresh C. Parmar, At & Post-Sanjan, Wesleyan Church, Ta-Umargam of District-Valsad, authorizing him to grant certificate of marriage between Indian Christians.

By order and in the name of the Governor of Gujarat,

**H. H. VARMA,**  
Deputy Secretary to Government.

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#### GENERAL ADMINISTRATION DEPARTMENT

##### Notification

Sachivalaya, Gandhinagar, 6<sup>th</sup> September, 2018.

#### Constitution of India

**No.GS/2018-28 /2018(1)-CU:-** In exercise of the powers conferred by clauses (2) and (3) of article 166 of the Constitution of India, the Governor of Gujarat hereby makes the following rules further to amend the Gujarat Government Rules of Business, 1990, namely:-

1. These rules may be called the Gujarat Government Rules of Business (Amendment) Rules, 2018.
2. In the Gujarat Government Rules of Business 1990, in the First Schedule, in Part-II, -  
under the heading “ (9) Subjects allotted to the Industries and Mines Department” after the entry at serial No. 38, the following entries shall be added, namely:-  
“39. Integrated Logistics sector.  
40. Establishment of Industrial Park and Park related to particular sector or function (like Logistics Park, Medical Park, Defence Park etc.), Infrastructural Assistance, Policy matters.  
41. Startups and policy matters related thereto, Startups Mission, Functions related to Startups Society”.

By order and in the name of the Governor of Gujarat,

**Dr. J. N. SINGH,**  
Chief Secretary to Government.



સામાન્ય વહીવટ વિભાગ

જાહેરનામું

સચિવાલય, ગાંધીનગર, ૬ સપ્ટેમ્બર, ૨૦૧૮.

ભારતનું સંવિધાન

ક્રમાંક: ગસ/૨૦૧૮-૨૮/સકન-૨૦૧૮(૧) કેયુ:- ભારતના સંવિધાનની કલમ ૧૬૬ના ખંડો(૨) અને (૩)થી મળેલ સત્તાની રૂએ, ગુજરાતના રાજ્યપાલ, આથી, ગુજરાત સરકારના કામકાજના નિયમો, ૧૯૯૦ વધુ સુધારવા માટે નીચેના નિયમો કરે છે :-

૧. આ નિયમો ગુજરાત સરકારના કામકાજના નિયમો (સુધારો) ૨૦૧૮ કહેવાશે.

૨. ગુજરાત સરકારના કામકાજના નિયમો, ૧૯૯૦ માં પહેલી અનુસૂચિમાં, ભાગ-૨માં,-

“(૯) ઉદ્યોગ અને ખાણ વિભાગને ફાળવેલ વિષયો” એ શીર્ષક હેઠળની નોંધ ક્રમાંક ૩૮ પરની નોંધ પછી, નીચેની નોંધો ઉમેરવી:-

“૩૯. સંકલિત લોજિસ્ટીક ક્ષેત્ર

૪૦. ઔદ્યોગિક પાર્ક તેમજ ચોક્કસ ક્ષેત્ર કે કાર્ય સંબંધિત પાર્ક (જેવા કે લોજિસ્ટીક પાર્ક, મેડીકલ પાર્ક, ડીફેન્સ પાર્ક વિગેરે)ની સ્થાપના, માળખાકીય સહાય, નીતિ વિષયક બાબતો

૪૧. સ્ટાર્ટઅપ્સ તેમજ તે સંબંધિત નીતિ વિષયક બાબતો, સ્ટાર્ટઅપ્સ મિશન, સ્ટાર્ટઅપ્સ સોસાયટી સંબંધિત કામગીરી.”

ગુજરાતના રાજ્યપાલશ્રીના હુકમથી અને તેમના નામે,

ડૉ. જે. એન. સિંઘ,  
સરકારના મુખ્ય સચિવ.

-----

સરકારી મધ્યસ્થ મુદ્રણાલય, ગાંધીનગર



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### PART IV-A

Rules and Orders (Other than those published in Parts I, I-A, and I-L) made  
by the Government of Gujarat under the Central Acts

#### FOOD, CIVIL SUPPLIES AND CONSUMER AFFAIRS DEPARTMENT

#### NOTIFICATION

Sachivalaya, Gandhinagar, 30<sup>th</sup> August, 2018.

#### CONSUMER PROTECTION ACT, 1986.

**No.GTH/2018/23/CPA/102018/461103/D:-** In exercise of the powers conferred by clause (a) of section 9 read with sub-section (1) (a), 1(A) and 2 of section-10 of the Consumer Protection Act, 1986 as amended in 1993 and 2002, Government of Gujarat hereby re-appointed Shri J. J. Pandya, retired Principal District Judge, Bhavnagar as the President. District Consumer Disputes Redressal Forum, Ahmcdabad(Rural) with headquarter at Ahmedabad.

Shri J. J. Pandya shall hold his office for a period of five years from the day he resumes the charge of his office or up to the age of 65 years whichever is earlier.

The Terms and conditions for the above appointment is applicable as decided in the notification No.GTH/2015/2/CPA/10/2013/489863/D dated 15/1/2015.

By order and in the name of the Governor of Gujarat,

**P.N.MEHTA,**

Section Officer

Food, Civil Supplies & Consumer Affairs Department

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**FOOD, CIVIL SUPPLIES AND CONSUMER AFFAIRS DEPARTMENT  
NOTIFICATION**

Sachivalaya, Gandhinagar, 30<sup>th</sup> August, 2018.

**CONSUMER PROTECTION ACT, 1986.**

**No.GTH/2018/24/CPA/102018/461103/D:-** In exercise of the powers conferred by clause (a) of section 9 read with sub-section (1) (a), 1(A) and 2 of section-10 of the Consumer Protection Act, 1986 as amended in 1993 and 2002, Government of Gujarat hereby re-appoints Shri D. Y. Malik, retired District and Sessions Judge, Jamnagar as the President, District Consumer Disputes Redressal Forum, Banaskanlha with headquarter at Palanpur.

Shri D. Y. Malik shall hold his office for a period of five years from the day he resumes the charge of his office or up to the age of 65 years whichever is earlier.

The Terms and conditions for the above appointment is applicable as decided in the notification No.GTH/2015/2/CPA/10/2013/489863/D dated 15/1/2015.

By order and in the name of the Governor of Gujarat,

**P.N.MEHTA,**

Section Officer

Food, Civil Supplies & Consumer Affairs Department

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# The Gujarat Government Gazette

**EXTRAORDINARY**  
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## **PART IV-A**

**Rules and Orders (Other than those published in Parts I, I-A, and I-L) made  
by the Government of Gujarat under the Central Acts**

### **FOREST AND ENVIRONMENT DEPARTMENT**

#### **NOTIFICATION**

Sachivalaya, Gandhinagar, 5<sup>th</sup> September, 2018.

#### **Indian Forest Act, 1927.**

No.GVN/2018/10 /BFR-1006-1832/K:- In exercise of the powers conferred by clause (d) of section 76 read with clause (h) of sub-section (2) of section 41 of the Indian Forest Act, 1927 (XVI of 1927), and of all the powers enabling it and the recommendation of the Central Empowered Committee constituted by the Hon'ble Supreme Court of India in writ petition No. 202/95 and 171/96 in this behalf the Government of Gujarat hereby makes the following rules further to amend the Bombay Forest Rules, 1942, namely :-

1. These rules may be called the Bombay Forest (Gujarat Amendment) Rules, 2018.
2. In the Bombay Forest Rules, 1942, (hereinafter referred as "the said rules") for rule 88 the following rule shall be substituted namely: -

"88. Regulation of Wood based industry. -

(1) For the purpose of this rule-

- (i) 'Wood based industry' means any industry which process wood as its raw material (saw mills/veneer/plywood or any other form such as Sandal, Katha wood etc.)
- (ii) 'Authorized Officer' means a Deputy Conservator of Forests in charge of a Division or Assistant Conservator of Forest in charge of a sub-division, as the case may be.
- (iii) 'Saw Mill' means plants and machinery in a fixed structure or enclosure, for conversion of round logs into sawn timber.
- (iv) 'A Veneer Unit' means a veneer manufacturing unit having either one peeler machine or one slicer machine.
- (v) 'A Plywood Unit' means a pasting unit consisting of one hot press up to 10 day lights.

- (vi) 'Industrial Estate' means areas notified by the State Government for establishment of wood based industries.
  - (vii) 'License' means a license granted under the rules notified by Gujarat State in pursuance of the guidelines published in gazette of India Dated 11-09-2017.
  - (viii) 'Principal Chief Conservator of Forests' means a forest officer of the rank of Principal Chief Conservator of Forests and HoFF.
  - (ix) 'State Level Committee (SLC)' means a committee constituted by the State Government.
  - (x) 'Round log' means a piece of wood in its natural form, having mid girth of thirty centimetre or more under bark and it includes such round log even after its bark has been removed or its surface has been dressed, manually or by using a band saw or any other machine or equipment to make its cross section square or near-square for the purpose of ease in its transportation and/or storage.
  - (xi) 'Sawn Timber' means beams, scantlings, planks, battens and such other product obtained from sawing of a round log.
- (2) No wood based industrial unit shall be established or operated anywhere in the state without obtaining a license in that behalf from the authorized officer.
- (i) No license to a wood based industrial unit shall be granted or renewed without obtaining prior approval of the SLC.
  - (ii) Every such license shall be granted to the industries situated beyond ten kilometers of aerial distance from the boundary of nearest notified forests or protected areas excluding road side/railway side/ canal side plantations, whichever is less.
  - (iii) However, A Wood Based Industry can be established in an industrial Estate or a Municipal area, irrespective of the aerial distance from the boundary of nearest notified forest or protected area.
- (3) Any person or firm desiring to establish a wood based industrial unit or to increase the existing licensed capacity of wood based industrial unit including any addition in the existing number of licensed machinery shall make an application to the authorized officer for getting license under sub-rule (2).
- (4) On receipt of an application under sub-rule (3), the Authorized officer shall make such inquiry as he deems fit and after satisfying himself on the question whether or not there would be any objection to granting the license applied for having regard to safeguarding the timber in any reserved or protected forest or in any land declared under section 4 of the Indian Forest Act, 1927 may give his opinion to the SLC for its consideration. The license shall be in Form-EE subject to the condition set out therein.

The license printed on white paper in Form-EE shall contain the description and number of the machinery installed, name of the firm, name of the proprietor and/or partners and/or directors (in case of limited company).

- (5) No wood based industrial unit shall be established or operated on the basis of any other permission or certificate or grant under any other law or rules or on the pretext that application under sub-rule (3) has been submitted to the authorized officer during its pendency.
- (6) Every license granted or renewed under this rule, shall subject to the provision contained in this rule regarding cancellation, be effective for a minimum period of one year or for a maximum period of five years at the option of the licensee.
- (7) Each wood based industry shall maintain and regularly update records and submit such periodical returns as may be directed by the authorized officer.

- (8) No license to a wood based industry shall be renewed without obtaining prior approval of the SLC. However, a SLC may delegate the power of renewal of license to a wood based industry to the Divisional Forest Officers of the Concerned Forest Divisions.
- (9) A fee of rupees One Thousand Five Hundred per annum shall be payable for the grant or renewal of a license.
- (10) the license shall be renewed before the expiry of the period of license as far as possible. An application for renewal of a license shall be made at least three months before the date of expiry of license. Licenses which are not renewed in time due to non-compliance on the part of licensee shall be treated as cancelled, and any operation on wood based industrial unit without renewal of a license after the expiry thereof shall render the licensee liable to penalties laid down in rule 129 for contravention of this rule. A fresh license to such unit can be issued with prior approval of the State Government.
- (11) A duplicate license shall be issued on an application made by the licensee on furnishing of adequate proof to the satisfaction of the authorized officer regarding loss, theft, damage or any other such exigency leading to the requirement of a duplicate license. A fee of rupees two thousand five hundred shall be payable for the issue of a duplicate license irrespective of the number of units contained in the license. The duplicate license shall also be issued in Form EE.
- (12) Transfer of license on sale/succession etc. shall be done only with the prior approval of SLC.
- (13) The number and type of the horizontal or vertical band saw, circular saw, peeler, slicer, hot press and other machines shall not be allowed to be increased in future. Such cases shall be treated as grant of the fresh license under these rules.
- (14) Conditions for transfer of ownership of wood based industrial unit on account of owner's death to his legal heir shall be as under;
  - (i) The unit shall not be sub-divided.
  - (ii) The number of wood conversion machines shall not be increased as a result of such transfer.
  - (iii) The succession certificate or the certificate of disclaimer from other heirs from a competent authority or a court of law shall be produced by the applicant.
  - (iv) New license shall be issued in the name of such legal heir for the remaining period of earlier license without charging the fee.
- (15) Notwithstanding anything contained in the foregoing sub-rules, the authorized officer may, where he has reason to believe that a licensee is operating the wood based industrial unit in contravention of the provisions of these rules and conditions of the license or the licensee is indulging in the activities prejudicial to the interests of forest conservancy, revoke the license granted under this rule after recording the reasons for doing so, in writing.
- (16) Where an authorized officer refuses to issue, or renew, or revokes a license granted under this rule or refuses to relocate or transfer a wood based industrial unit, he shall do so by an order communicated to the applicant or holder, as the case may be, giving reason in writing for such refusal or revocation.
- (17) If for any reason, any person is aggrieved by the order so passed, shall make appeal within thirty days of the order being served on him, to the State Level Committee, who shall decide the appeal after giving due opportunity of being heard, within a period of three months. If any person is aggrieved by the orders so passed in the appeal, he may prefer an appropriate petition application/appeal in the High Court.

- (18) Following industries/processing plants not using round logs of domestic origin or operating without a band saw or re-saw or circular saw of more than thirty centimeter diameter shall not require license.
- (i) Industries/processing plants which use:
- sawn timber, cane, bamboo, reed, plywood, veneers or imported wood, procured from legitimate sources
  - block board, MDF or similar wood based products, procured from legitimate sources.
  - round log/timber from species declared as agro-forestry/agricultural crops and/or exempted from the purview of the feeling and transit regime in the State of Gujarat and procured from legitimate sources.
- SLC may allow installation of circular saw of diameter up to 60 centimeters in such industries having specialized requirement.
- (ii) The units not using round logs of domestic origin or operating without a band saw or re-saw or circular saw of more than thirty centimeter diameter not requiring license shall have to be registered with the Authorized Officer of the concerned Forest division.
- (19) Nothing contained in this rule shall apply to the charcoal manufactured from Gando baval (*Prosopis juliflora*) beyond 5 km. of the boundary of Reserved Forest, Protected Forest Areas declared under sec.4 of Indian Forest Act, Sanctuaries, National parks and Sea coast.
3. In the said rule, rule no. 88(A) shall be deleted.

By order and in the name of the Governor of Gujarat,

**PRADEEP SINGH,**

Joint Secretary to Government.

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3. In the said rules, for Form-EE, the following Form shall be submitted, namely: -

**Form-EE**

**See Rule No.88(4), 88(11)**

**License to establish/operate a Wood based industry**

Registration No.....

License is hereby granted/renewed to Shri (In case of a partnership the names of all the partners shall be mentioned)

.....of.....

(in block letters)

(address)

(hereinafter called "the licensee") to establish/operate a wood based industrial unit at..... subject to the provisions of Indian Forest Act, 1927, in its application to the State of Gujarat and the rules made thereunder on the following conditions namely: -

- The license shall remain in force for the period commencing on.....(DD/MM/YYYY) and ending on the.....(DD/MM/YYYY)
- The Wood based industrial unit granted is hereafter known with following name.

|  |
|--|
| <p>(A) .....</p> <p>(B) Number and type of machinery .....</p> |
|--|

The details of above box shall be filled in by the authorized officer in his hand writing

- (3) The licensee shall maintain such records and registers and submit such periodical returns as may be directed by the authorized officer.
- (4) The licensee shall see that-
  - (a) The site of wood based industrial unit including the yards for storage of round timber, sawn timber and waste wood is enclosed within a fence fitted with proper gates,
  - (b) All the round timber, sawn timber and wood waste is properly stacked according to the instructions that may be issued from time to time by the supervisory staff so as so facilitate stock taking,
  - (c) Timber for sawing or conversion is not accepted unless it bears property mark and is covered by a forest transit pass other documentary evidence such as a cash receipt from the timber merchant,
  - (d) Timber which does not conform to the requirement of clause (c) is not accepted for conversion and intimation in respect of such timber is forthwith given to the supervisory guard or the nearest forest-officer.
  - (e) The wood based industrial unit or the premises of the same is open to inspection at all times by any officer of the Forest Department or by any member of the supervisor staff appointed for this purpose,
  - (f) The license is produced for inspection on demand by any authority aforesaid.
- (5) The license shall be renewed before the expiry of the period of license as far as possible. An application for renewal of a license shall be made at least three months before the date of expiry of license. Licenses which are not renewed in time due to non-compliance on the part of licensee shall be treated as cancelled, and any operation on wood based industry without renewal of a license after the expiry thereof shall render the licensee liable to punishment for contravention of this rule. A fresh license to such unit can be issued with prior approval of the State Government.
- (6) A duplicate license shall be issued on an application and on payment of prescribed fee by the licensee on furnishing of adequate proof to the satisfaction of the authorized officer regarding loss, theft, damage or any other such exigency leading to the requirement of a duplicate license. The duplicate license shall also be issued in the form prescribed under Form-EE.
- (7) Transfer of license on sale/succession etc. shall be done only with the approval of SLC.
- (8) The number and type of the horizontal or vertical band saw, circular saw, peeler, slicer, hot press and other machines shall not be allowed to be increased in future. Such cases shall be treated as grant of the fresh license under these rules.
- (9) The authorized officer may, where he has reason to believe that a licensee is operating the wood based industry in contravention of the provisions of these rules and conditions of the license or the licensee is indulging in the activities prejudicial to the interests of forest conservancy, at any time revoke the license granted after recording the reasons for doing so.
- (10) This license shall be displayed at the office of the wood based industry.

Dated.....day of .....20.....

Dy.CF/A.C.F.

(Authorized Officer)

Seal of the authorized officer.

By order and in the name of the Governor of Gujarat,  
Additional/Joint/Deputy Secretary to Government,  
Forest & Environment Department.





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# The Gujarat Government Gazette

## EXTRAORDINARY

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#### PART IV-A

**Rules and Orders (Other than those published in Parts I, I-A, and I-L) made  
by the Government of Gujarat under the Central Acts**

#### PORTS AND TRANSPORT DEPARTMENT

#### NOTIFICATION

Sachivalaya, Gandhinagar, 12<sup>th</sup> September, 2018

#### **Inland Vessels Act, 1917.**

**No: PT/2018/17/WKS/102013/792/GH-1** :- WHEREAS certain draft rules were proposed to be issued under sections 19R and section 67 read with sections 19 and 52 of the Inland Vessels Act, 1917 (1 of 1917) and taking into consideration of Inland Waterways Authority of India Model Rules, 2013, were published as required by sub-section (1) of the section 74 of the said Act, on pages 85-1 to 85-452 of the Gujarat Government Gazette, Extra Ordinary, Part IV-A dated the 1<sup>st</sup> August, 2018, vide Government Notification, Ports and Transport Department No. PT/2018/13/WKS/102013/792/GH-1, dated 1<sup>st</sup> August, 2018, inviting objections or suggestions from all persons likely to be affected thereby, within thirty days from the date of publication of the notification in the *Official Gazette*.

AND WHEREAS, no objections or suggestions were received by the Government in respect to the said draft rules.

NOW, THEREFORE, in exercise of the powers conferred by sections 19R and section 67 read with sections 19 and 52 of the Inland Vessels Act, 1917 (1 of 1917), and in supersession of the Gujarat Inland Vessel (Survey, Construction and Safety) Rules, 2011 and Gujarat Inland Vessels Registration Rules, 2011 made in this behalf the Government of Gujarat hereby makes the following rules, namely:-

1. Short title and extent:-

(1) The rules may be called the Gujarat Inland Vessels Rules, 2018.

(2) These rules shall apply to inland vessels registered in the State of Gujarat or which ordinarily ply on inland waterways passing through the State of Gujarat except fishing vessels, Defense, coast guard vessels, or ship registered under the Merchant Shipping Act, 1958 (44 of 1958) subject to applicability of provisions under section 19S of the Act.

#### **Application**

### **CHAPTER - I GENERAL PROVISIONS**

#### **1.1 Definitions:-**

1.1.1 In these rules, unless the context otherwise requires:-

#### **Definitions**

- 1) '**Accommodation**' means any space intended for the use of persons normally living on board, or of passengers, and includes the galley, storage space for provisions, toilets and washing facilities, laundry facilities, landings and gangways, but not the wheel house;
- 2) '**Act**' means the Inland Vessels Act of 1917 (Central Act 1 of 1917);
- 3) '**Administration**' means The Gujarat Maritime Board having responsibility for maritime and /or inland waterways matters and in particular for the Administration of the rules;
- 4) '**Amidships**' means at the middle of the length L;
- 5) '**Approved**' means approved by the Administration;
- 6) '**Approved life-buoy**' means a life buoy approved by the Administration in accordance with either the specifications of the International Life Saving Appliances Code or the specifications notified by the Administration for the approval of such lifesaving appliances carried on board the Inland Vessels;
- 7) '**Approved consultant**' means a naval architect or a Master FGM or a marine engineer MEO Class I qualified to certify the safe construction of hull/machinery of the vessel for the purpose of survey and duly approved by the Administration;
- 8) '**Bulkhead deck**' means the uppermost deck to which transverse watertight bulkheads are carried;
- 9) '**Buoyant apparatus**' means rectangular rafts approved by the

Administration and fitted with buoyancy tanks / materials sufficient to support the approved number of persons in the water and includes buoyant deck seat;

- 10) '***Cargo-passenger vessel***' means a cargo vessel that is approved by the Administration to carry more than twelve passengers on identified services and that meets safety requirements set out in these rules for that type of vessel and such other safety requirements specified by the Administration as are deemed necessary to provide a satisfactory level of safety;
- 11) '***Certificate of Survey***' means the certificate of survey granted under section 9 of the Act;
- 12) '***Class Survey of Classification Society***' means survey by a ship classification society to assign characters and class notations of inland vessel;
- 13) '***Classification society***' means an organization that complies with the standards adopted by the organization and is recognized, or otherwise authorized, by the Administration for the purpose of conducting inspections and surveys in accordance with applicable rules on behalf of the Administration;
- 14) '***Channel marks***' means any mark capable of being used as an aid to navigation by an inland vessel navigating in an inland waterway. These include coconut piles / bamboo marks, conspicuous building or structure, buoys and beacons;
- 15) '***Chief Examiner Inland Water Transport***' means an officer so appointed by the State Government in-charge of syllabus, examination and issue of certificates. In Gujarat Maritime Board, Chief Nautical Officer or Nautical Surveyor is Chief Examiner for all grades and both streams (Deck and Engine) of examination and certification as may be decided by Administration.
- 16) '***Chief Surveyor***' means an officer duly appointed by the State Government under these rules. In Gujarat Maritime Board, Chief Surveyor is Chief Nautical Officer or Nautical Surveyor as decided by Administration.

- 17) '**Company**' means the owner of the vessel or any other organization or person such as the manager who has assumed responsibility for operation of the vessel from the owner of the vessel and who, on assuming such responsibility has agreed to take over all the duties and responsibilities connected with vessel safety and the prevention of pollution;
- 18) '**Competent Authority**' means an authority as appointed by the State Government consisting of experienced Master FGM, Naval Architects and Marine Engineers. In Gujarat State, Competent Authority is Gujarat Maritime Board.
- 19) '**Convoy**' means a group of vessels, floating equipment or rafts towed or pushed by an inland mechanically propelled vessel;
- 20) '**Design Declaration**' means a format of application backed by vessel's preliminary General Arrangement Plans, Stability Booklets and preliminary Safety Plans.
- 21) '**Dumb Barge**' means a vessel that is not fitted with any means of propulsion;
- 22) '**Drifting**' means being driven by the stream with the engine stopped;
- 23) '**Engine room**' means the space in which the propulsion machinery and auxiliaries are installed;
- 24) '**Existing vessel**' means a vessel that is not a new vessel;
- 25) '**Ferry boat**' means any vessel providing a transport service across or along a waterway;
- 26) '**Fishing vessel**' is a vessel used for catching fish, or other living resources of the water;
- 27) '**Floating equipment**' means any floating structure carrying mechanical installations and intended for work on waterways or in ports (e. g. a dredger, elevator, sheer-legs or crane);
- 28) '**Floating installation**' means a raft or any other structure, object or assembly capable of navigation not being a vessel or floating equipment;
- 29) '**Form**' means form appended to these rules;
- 30) '**Freeboard**' means the distance measured vertically downwards

amidships from the upper edge of the deck line to the position at which the upper edge of the appropriate load line mark lies;

- 31) '**G.T**' means gross tonnage;
- 32) '**Government**' means Government of Gujarat unless otherwise specified;
- 33) '**Inland vessel**' of '**inland mechanically propelled vessel**' means a mechanically propelled vessel, which ordinarily plies on inland water, but does not include fishing vessels and a ship registered or required to be registered under the Merchant Shipping Act, 1958 (44 of 1958);
- 34) '**Inland water**' means
  - (a) any canal, river, lake or other navigable water within a State,
  - (b) any area of any tidal water deemed to be the inland water as defined by the Central Government under section 70 of the Act.
  - (c) waters declared by the Central Government to be smooth and partially smooth waters under clause (41) of section 3 of the Merchant Shipping Act, 1958 (44 of 1958);
- 35) '**Length and breadth of a vessel**' means maximum length and breadth of a vessel;
- 36) '**Lock**' means confined section of river or canal where level can be changed for raising and lowering boats between adjacent sections by use of gates and sluices;
- 37) '**Lock basin**' means the approach to the lock narrowing towards the lock from upstream and downstream;
- 38) '**Margin line**' is a line drawn at least 76 mm below the upper surface of the deck from which freeboard is measured;
- 39) '**Master**' means the person having command of a vessel and includes any person in charge of a vessel;
- 40) '**Mechanically propelled vessel**' means every description of vessel propelled wholly or in part by electricity, steam or other mechanical power including dumb vessel towed by the mechanically propelled vessel and vessel propelled by outboard motor;
- 41) '**Miles**' means nautical miles;

- 42) '**Name of the vessel**' includes the registration mark referred to in section 19H of the Act;
- 43) '**Navigable channel**' means the channel intended for uninterrupted passage of vessels;
- 44) '**New vessel**' means a vessel the keel of which is laid or that is at a similar stage of construction on or after the date of these rules coming into force;
- 45) '**Operating Areas**' For the purpose of these rules where applicable, the inland waterways operating area is divided as follows:
- a) Zone-1: A zone where maximum significant wave height does not exceed 2.0 meters.
  - b) Zone-2: A zone where maximum significant wave height does not exceed 1.2 meters.
  - c) Zone-3: A zone where maximum significant wave height does not exceed 0.6 meters.
- 46) '**Organization**' means the International Maritime Organization;
- 47) '**Owner**' means the owner of a vessel and carries same meaning as Company ' as defined above;
- 48) '**Passenger**' includes any person carried in a mechanically propelled vessel other than the master and crew and the owner, his family and servants;
- 49) '**Passenger vessel**' means any vessel built and operated to carry more than 12 passengers and that is not a cargo-passenger vessel;
- 50) '**POB (Person on board) or complements**' means total number of people to be taken on board, i.e. crew + passengers.
- 51) '**Pleasure vessel**' means a vessel that is used, or, being a vessel in the course of construction, is intended to be used, wholly for recreational or sporting activities;
- 52) '**Recognized standards**' are standards accepted by the Administration, which may include applicable international or national standards or standards adopted by a classification society;
- 53) '**Registered Authority**' means the registering Authority appointed under the Act;
- 54) '**Restricted visibility**' means any condition in which visibility is

restricted by fog, mist, heavy rainstorms, sandstorms, or any other similar causes;

- 55) '*Sailing vessel*' means any vessel under sail, without using the propelling machinery;
- 56) '*Safety Plan*' a plan which shows, the disposition of Life Saving Appliances, Fire Fighting Appliances, Light and Sound Signal System. This plan needs to be approved by the competent authority.
- 57) '*Schedule*' means the schedule appended by these Rules;
- 58) '*Short voyage*' means a voyage of 8 hours or lesser duration;
- 59) '*Survey*' means the survey of a mechanically propelled vessel under the Act or these Rules;
- 60) '*Surveyor*' means a surveyor appointed under the Act or in accordance with these rules and includes Chief Surveyor;
- 61) '*Tidal water*' has the meaning assigned to it in clause (49) of section 3 of the Merchant Shipping Act, 1958;
- 62) '*Underway*' means a vessel which is not at anchor or made fast to the shore or aground;
- 63) '*Vessel*' means an inland vessel or inland mechanically propelled vessel;
- 64) '*Vessel not under command*' means a vessel, which through some exceptional circumstances is unable to man oeuvre as required by these rules and is therefore unable to keep out of the way of another vessel.
- 65) '*Voyage*' includes the plying of a mechanically propelled vessel at or about any place.
- 66) '*Wheelhouse*' means the space in which all equipment necessary for navigating and controlling the vessel is installed.

1.1.2 Words and expressions used, but not defined in these rules, shall have meaning assigned to them in the Act.

## 1.2 Exemptions:-

1.2.1 The Administration may exempt from the application of all or any part of these rules:

- a) vessels or classes of vessels operating on navigable waterways as

designated by the Administration, where it considers that the sheltered nature and conditions of such operations are such as to render the application of any specific provisions of the rules unreasonable or unnecessary; and / or

**Exemptions**

- b) Vessels the keels of which were laid down before the entry into force of these rules are exempted for a period of twenty four (24) months or as deemed appropriate by Administration.

1.2.2 The Administration may authorize, in respect or navigation on its National / State waterways, exemptions from one or more provisions of these rules for the limited local voyages or in harbor areas provided that it complies with such other requirements that are, in the opinion of the Administration, adequate for the intended voyage. Such exemptions and the voyages or areas to which they apply shall be specified in the vessel's Certificate of Survey.

1.2.3 Where a vessel is exempted from these rules under **1.2.1 (a)**, the Administration may require compliance with the provisions of these rules as far as is practicable and reasonable.

1.2.4 The Administration may exempt a vessel that embodies features of a novel kind from any of the provisions of these rules, the application of which might seriously impede research into development of such features and their incorporation in vessels. Any such vessel shall, however, comply with such safety requirements that, in the opinion of the Administration, are adequate for the service for which it is intended and are such as to ensure the overall safety of the vessel.

**1.3 Force Majeure:-**

1.3.1 A vessel which is not subject to the provisions of these rules at the time of its departure on any voyage shall not be subject to such provisions on account of any deviation from its intended voyage due to stress of weather or any other leading to force majeure.

**Force  
Majeure**

1.3.2 In applying the provisions of these rules, the Government shall give due consideration to any deviation or delay caused to any



vessel owing to stress of weather, or any other cause leading to force majeure.

#### **1.4 Equivalents:-**

Where the rules require that a particular fitting, material, appliance, apparatus or type thereof, shall be fitted or carried in a vessel, or that particular provision shall be made, the Administration may allow any fitting, appliance, apparatus or type thereof to be fitted or carried, or any other provision to be made in that vessel, if it is satisfied by trials thereof or otherwise that such fitting, material, appliance, apparatus or type thereof is at least as effective as such required by these rules.

#### **Equivalents**

#### **1.5 Standards:-**

1.5.1 The construction, installation, structural strength, fittings, material, appliances and apparatus unless expressly provided by these rules, shall be of recognized standards.

#### **Standards**

1.5.2 In addition to the requirements and standards referred to in these rules, other requirements and standards recommended by the other statutory bodies may be applied whenever the Administration considers such requirements and standards to be appropriate.

#### **1.6 Carriage of passengers:-**

1.6.1 Inland vessels shall not carry any passengers unless specifically authorized by the Administration.

#### **Carriage of**

1.6.2 The maximum number of passengers carried on board a passenger vessel or a cargo-passenger vessel shall not exceed the number of identified on Certificate of Survey.

#### **Passengers**

1.6.3 A notice showing the maximum number of passengers permitted to be carried on specific decks and in specific spaces, calculated in accordance with rules, shall be clearly displayed at the access to each such deck and other prominent spaces.

**1.7 Plans, signs, instruction manuals, name plates and languages:-**

- 1.7.1 All name plates, signs, instructions, notices, plans and documents on board vessels, relating to safety and operation of the vessel and its machinery, shall be drawn up in English and Hindi or Gujarati.
- 1.7.2 All mechanically propelled inland vessels shall carry adequate including drawings, plans and instruction manuals necessary for operation and safety of life.

**Plan, Signs,  
Instruction  
Manuals,  
Name Plates  
and  
Languages**

**1.8 Casualties and incidents:-**

In the event of a casualty or incident involving the vessel resulting in loss of life or vessel being materially damaged, stranded, abandoned or lost, the master or the Company shall act as detailed in Chapter - V of these rules.

**Casualties  
and Incidents**

**1.9 Repairs, Alterations, Modifications of major character:-**

- 1.9.1 The repairs, alternations and modifications of a major character and out fitting related thereto on existing vessels should meet the requirements of new vessel to such an extent as the Administration. The Owner shall inform and take approval of the Administration of modifications before such alternations and modifications are carried out.
- 1.9.2 For the purpose of these rules, the following repairs, alternations and modifications shall be recognized as being of "major character"
- a) Any changes that substantially alter the dimensions of the vessel,
  - b) Any changes that substantially increases vessel's service life, or
  - c) Any conversion that alters the functional aspects of the vessel.

**Repairs,  
Alterations  
Modifications**

**1.10 Management of safety and environmental protection:-**

- 1.10.1 The Company and the master of the vessel shall be responsible for compliance with the applicable provisions of these rules and for the

management of the vessel so as to achieve safety in operation and the environment.

**Management  
of Safety and  
Environmental  
Protection**

- 1.10.2 The Company and the master of the vessel shall comply with requirements of the Government in relation to the management of safety and environmental protection.

**1.11 Vessel identification:-**

The Registration Mark assigned by the registering authority under section 19H the Act shall be entered on the Certificate of Survey and also displayed Conspicuously as per requirements of these rules.

**Vessel  
Identification**

**1.12 Official Log Book:-**

- 1.12.1 The master and engineer / driver of the vessel shall keep an official log book in Form No.1 appended to these rules and shall make, or cause to be made, such entries in that log book as required.
- 1.12.2 An entry in an official log book shall be made by the Master, Engineer/ Driver or officer-in-charge of the inland vessel:
- a) As soon as possible after the occurrence to which it relates; and
  - b) The date and time of the occurrence and the entry.
- 1.12.3 An entry in the official log book shall be made by the Master or the officer-in-charge and counter signed by the Competent Authority carrying out any inspection of the vessel stating the outcome of the inspection and action taken if any.

**Official Log  
Book**

**1.13 Inland Vessel State Inspection:-**

- 1.13.1 Every vessel when in a port of another State is subject to inspection by officers duly authorized by such Administration in so far as this inspection is directed towards verifying that the certificates issued under Chapter - II are valid.
- 1.13.2 Such certificates, if valid, shall be accepted unless there are clear grounds for believing that the condition of the vessel or of its equipment does not correspond substantially with the particulars of any of the certificates or that the vessel is not river worthy.
- 1.13.3 In the circumstances specified in **1.13.2** or where a certificate has

**Inland  
Vessel State  
Inspection**

expired or ceased to be valid, the officer carrying out the inspection shall take steps to ensure that the vessel shall not leave the port unless it can proceed to the next port of call, or leave the port for the purpose of proceeding to an appropriate repair yard, without danger to the vessel or persons onboard.

- 1.13.4 The officer carrying out the inspection shall make an entry in the 'Official log book' stated in rules **1.12** above.

**CHAPTER - II****SURVEY OF INLAND MECHANICALLY PROPELLED VESSELS****2.1 Categorization of Vessels:-**

2.1.1 For the purpose of survey inland vessels may be classified into two **Categorization of Vessels** categories as follows:-

- a) Category A:- All Inland Vessels constructed for operating / operating in Zone 1
- b) Category B:- All Inland Vessels other than Category A

**2.2 Types of Survey:-**

2.2.1 Every vessel to which the provisions of the Act and these rules apply shall be subjected to the surveys specified herein:- **Types of Survey**

- I.** Initial Survey – survey before the vessel is put in service.
- II.** Periodical Survey – once in every twelve months.
- III.** Dry Docking Survey as per details in 2.2.4 below.
- IV.** Special Survey – Additional surveys as occasion demands.

The Initial Survey shall be aimed at ensuring the following:-

- i. The vessel's construction is meeting the safety standards and is **Initial Survey** in accordance with approved plans and design.
- ii. The freeboard mark and draft marks are appropriately marked.
- iii. The tonnage computation of the vessel is approved by Administration.
- iv. Safety Equipment plan is approved by the Administration.
- v. Stability Booklet of the vessel is prepared by the Designer and approved by the Administration.
- vi. Vessel is adequately equipped to effectively contribute to Prevention of Pollution of Inland Waterways.

2.2.2 The survey to include a complete inspection of the hull, machinery and equipment to ensure that arrangements, material, scantlings of hull, main and auxiliary machinery, life-saving appliances, fire appliances and other equipment fully comply with the requirements under the Act and these rules as are applicable in its case provided

that the bottom of the vessel which has been surveyed or examined by a surveyor before the vessel is launched may be exempted unless the surveyor has special reasons for considering it necessary.

- 2.2.3 The periodical survey of the vessel shall include an inspection of the whole of the hull, machinery and equipment to ensure that hull, machinery and equipment are in satisfactory condition and fit for the service for which the vessel is intended and that she complies with the requirements under the Act and these rules as are applicable in its case.

**Periodical  
Survey**

- 2.2.4 The Dry Docking survey as and when becoming due shall be carried out together with the periodical / special survey. All Category A vessels shall undergo a dry docking survey at interval not exceeding 3 years and category B vessels at interval not exceeding 5 years. The dry docking survey shall be carried out by a surveyor in a dry dock or on a slipway such that all portions of hull external can be examined during the light condition to the satisfaction of the surveyor. If a dry docking survey is carried as part of a Special Survey (even if the periodical survey is not due), periodical survey shall be carried out as part of the dry docking survey and date of the periodical survey harmonized with the dry docking survey.

**Dry Docking  
Survey**

- 2.2.5 A certificate of survey shall remain valid if the vessel undergoes and meets the requirements of survey detailed in sub-rule 2.2.1

- 2.2.6 A Special Survey either general or partial or dry docking survey, according to the circumstances shall be carried out:-

**Special Survey**

- (a) If the efficiency or performance of the equipment's of the vessel has changed or whenever a request for extension of certificate of survey is being considered.
- (b) Every time a defect affecting safety of the vessel is discovered or an accident (such as Collision, Grounding and capsizing) occurs which affects the safety of the vessel.
- 2.2.7 The special survey shall be conducted in such a manner so as to ensure that the necessary repairs or renewals have been effectively made, that the material and workmanship of such repairs or renewals

are in all respects satisfactory and that the vessel is fit for the service for which she is intended.

2.2.8 On the application made by the owner or his authorized representative or master of an Inland Vessels, as per procedure laid down in sub-rule 2.6.1 of these rules, the validity of a certificate of survey may be extended up to three months on the exigencies of the situation and if the surveyor recommends for the grant of the certificate for that period.

2.2.9 If exigencies of the situation warrant dry docking period may be revalidated beyond the periods stipulated in sub-rule 2.2.4 of these rules on application by the owner, or his authorized representative or master of an Inland Vessel on deposit of full survey fees. The extension of validity of the docking period shall not exceed one year provided the surveyor recommends the grant of validity for that period and the Inland Vessel is surveyed by him.

### **2.3 Appointment of Surveyors and duties of surveyor:-**

2.3.1 Nautical Surveyor including Chief Surveyor are Surveyor. Master FGM and Marine Engineer MEO Class I working with Administration are notified as Surveyor in charge through *Official Gazette*.

2.3.2 Following persons may be appointed as Surveyor in Charge subject to each of them individually seeking the authorization of the Chief Surveyor and notified by the State Government in the *Official Gazette*:

- 1) MEO Class II working with Administration.
- 2) Surveyors of Indian Register Shipping (IRS),
- 3) Surveyors of International Classification Society which is member of IACS,
- 4) Individuals appointed as Surveyors by the Chief Surveyor.

2.3.3 No person shall be appointed as Chief Surveyor unless he meets the qualifications and experience enumerated in any one of the following:

**Appointment  
of Surveyors  
& duties of  
Surveyors**

- a) Holder of Extra Master Certificate of Competency and has served in the capacity of a Surveyor for a minimum period of 5 years in the Directorate General of Shipping / State Inland Water Transport Department / State Maritime Board.

**Qualification-  
ion of Chief  
Surveyor**

2.3.4 A Chief Surveyor shall discharge the following duties; namely:-

- (a) Receive applications for survey of vessels, and confirm that they are in order.
- (b) Fix the date and place of surveys and conduct the survey as per rules.
- (c) Verify and ensure that the vessels are constructed as per the approved drawings, General Arrangement Plans etc.
- (d) Determine whether the hull of the vessel is in proper condition and fit for service.
- (e) Test the stability of the vessel so as to ensure safety against capsizing under any conditions;
- (f) Ascertain that the machinery and machinery layout, propeller, shafting, gears and steering, pipe lines such as bilge and ballast, oil transfer etc., wheel house, crew accommodation, passages galleys, stores, service place etc., ventilation, change of air for engine room etc., life-saving, fire-fighting, light and sound signals, navigation and communication equipment etc. are in order and that generally the vessel is fully equipped for the safety and convenience of the crew passengers;
- (g) Issue declaration of survey to the vessel surveyed by surveyor to the owner or master of the vessel;
- (h) Give copies of documents on payment of fees specified in these rules and maintain accounts of all dues connected with survey and miscellaneous receipts;

**Duties of  
Chief  
Surveyor**

2.3.5 The surveyor should possess any of the following qualifications and experience:

- a) Master Mariner with 5 years of sailing experience out of which one year command on FG ships and holder of Master's FGM certificate issued by Director General of Shipping, Government of India or equivalent international certificate recognized by Government of India or

**Qualification  
of Surveyor**



- b) Marine Engineer in possession of minimum First / Second class Motor / Steam MOT Certificate issued by Director General of Shipping, Government of India or equivalent certificate recognized by Government of India and having minimum 5 years of sailing experience after first certificate of competency of which minimum 2 years sailing experience must be at Management Level, **or**

- c) As decided by Chief Surveyor and approval of competent authority.

In case of surveyor being an agency, the concerned agency shall have personnel with above qualification on their panel / role.

- 2.3.6 The Surveyor and Surveyor in-charge shall be subordinate to the Chief Surveyor and shall discharge the following functions and duties, namely:-

- (a) Attend to the survey of vessels as per directions from the Chief Surveyor;
- (b) Maintain registers of vessels;
- (c) Conduct periodical inspection as per statutory provisions on board vessels and verify the records to be maintained on board, validity of crew certificate, survey certificate, lifesaving appliances, firefighting appliances, navigation and communication equipment's, machineries etc. In case of default he shall detain the vessel and make necessary recommendations for suspension / cancellation of the certificate or registration / survey to the competent authority. Such detention order shall be in Form 11(a);

**Duties of  
Surveyor**

- 2.3.7 Every surveyor shall, for the purposes of any survey made by him, deemed to be a public servant within the meaning of the Indian Penal Code.

**2.4 Powers of Surveyors:-**

- 2.4.1 For the purpose of a survey, the surveyor may, at any reasonable time, go on board any inland mechanical propelled vessel, and may inspect the mechanically propelled vessels and every part thereof, including the hull, engines and other machinery, and all equipment and articles on board.

**Powers of  
Surveyors**

Provided that he shall not unnecessarily hinder the loading or unloading of the mechanically propelled vessel, or unnecessarily detain or delay her from proceeding on any voyage.

- 2.4.2 The owner, master and officers of the mechanically propelled vessel, shall afford to the surveyor all reasonable, facilities for the survey, and all such information with respect to the mechanically propelled vessel, and her machinery or any part thereof, and all equipment and articles on board, as he may require for the purposes of a survey.

**2.5 Fees in respect of survey:-**

- 2.5.1 Before a survey is commenced, the owner or master of the mechanically propelled vessel, to be surveyed shall pay the fees payable under the Act and under these rules as specified by the Administration.
- 2.5.2 Where a resurvey is necessitated on account of any default, act or omission on the part of the owner or master or any member of the crew the owner shall be liable to pay such fee as may be payable for a survey.
- 2.5.3 Any fee payable under the Act or under these rules shall be paid by under such head of account as the Administration may specify from time to time.
- 2.5.4 No fee paid under the Act or these rules shall be refundable.

**Fee in respect  
of Survey**

**2.6 Survey for new construction:-**

- 2.6.1 Category A vessel shall be designed constructed and maintained under the survey of a classification society who is a member of International Association of Classification Societies (IACS) by the Administration.
- 2.6.2 Category B vessels shall be designed, constructed and maintained either under class survey of a recognized classification society stated in 2.6.1 above or under the authority of the Chief Surveyor, assisted by Surveyors appointed under sub rule 2.3.2 following Classification Society (member of IACS) Rules for construction of Inland Vessels acceptable by Administration.

**Procedure for  
Survey**

- 2.6.3 The owner or builder who intends to build a vessel shall, before laying the keel of the vessel, submit a preliminary application expressing his intention to build a vessel, in Form 1 A along with particulars and details specified therein, to the Chief Surveyor so that the progress of construction can be monitored by the Surveyor from the very beginning at different stages of construction.
- 2.6.4 Upon receipt of application as above, the Chief Surveyor shall verify the same and decide the category to which the vessel is to be included and intimate it to the applicant.
- 2.6.5 The date and place of laying the keel for the new vessel shall be intimated to the Chief Surveyor, in writing, for the purpose of official records of the date of laying the keel.

## **2.7 Application for Survey:-**

- 2.7.1 Every application for survey shall be made to the chief surveyor or surveyor notified by the Government by the registered owner or his authorized agent or master or in case of minor his / her legal / natural guardian.
- 2.7.2 The application shall be made in Form 2 and shall contain the particulars required therein.
- 2.7.3 Every application for vessel's periodical, dry docking or special survey shall be accompanied by the following records in respect of the vessel, namely:
- i. Copy of registration of the vessel or records evidencing the title of the applicant in respect of the vessel;
  - ii. Copy of latest certificate of Survey, if it is an existing vessel and in case the vessel undergoing the first initial survey, a declaration to that effect;
  - iii. Authorization from the registered owner, in the cases where the applicant is not the registered owner;
  - iv. Documentary proof of his legal / natural guardian in case of minor;
  - v. Challan receipt / appropriate document evidencing payment of such fees to the Administration for the survey;

## **Application for Survey**

- vi. Duplicate of latest declaration, if any, given to the owner;
- vii. The name of port or place at which survey is expected to be carried out;
- viii. Such other records as are necessary for and in connection with the survey;

2.7.4 For application for the initial survey of Inland Vessel either newly constructed or existing vessel being surveyed for the first time, application shall be accompanied by:-

- a) Particulars in Form 3
- b) General Arrangement Plans, safety equipment plans, structural drawings, freeboard marking, shell expansion, machinery and machinery layout, propeller, shafting, gears and steering plans, pipeline such as bilge and ballast, oil transfer etc.
- c) Particulars of wheel house, crew accommodation, passages, galleys stores / service place etc.
- d) Particulars of ventilation / change of air of engine room, crew accommodation etc.
- e) Particulars of life saving, firefighting, light and sound signals, navigation and communication equipment.
- f) Computation of the strength of the hull, decks, bulkhead including collision bulkhead etc;
- g) Computation of stability, free board clearly showing amount of cargo and method of its placement, depicting calculation of meta centric height;
- h) all possible data from the Ex Registering Authority regarding stability, drawings as mentioned above etc. and builders certificate, if available; Provided that, if previous surveying authority is unable to supply such data, for any reason and communicates the same in writing, the owner shall produce such communication;
- i) Certificate of machineries from manufacturers or classification societies or surveyors. Copy of Registration Certificate of vessel, if applicable.

2.7.5 On receipt of an application for survey, the Chief Surveyor / Surveyor or shall fix mutually convenient date, time and place of survey which shall not be later than 7 working days and shall give intimation thereof to the applicant in Form 4. Chief Surveyor / Surveyor can nominate Surveyor in Charge to conduct survey.

**2.8 Manner of Survey:-**

**Manner of  
Survey**

- 2.8.1 The survey shall be made at such time, place and date as may be specified in the intimation referred to in rule 2.7.5 Provided that the surveyor may postpone the survey for reasons to be recorded and in the case of such postponement, the survey shall be made within 7 working days and no further postponement should be allowed. The fresh intimation, in the manner herein before specified shall be given;
- 2.8.2 Provided further that the surveyor may require the vessel to be brought over to dry dock or any other suitable place, if such a step is, for reasons to be recorded, considered necessary by the surveyor for the purpose of the survey and no survey need be made in pursuance of an application unless the direction of the surveyor in this regard are complied with by the applicant:
- 2.8.3 The survey shall be made by actual inspection of the vessel and every part thereof including the machinery and any other equipment, fittings, appliances in the vessel, the inspection of which is relevant for the purposes of the Act.
- 2.8.4 During the survey, the surveyor shall satisfy himself as to the requirements specified in section 7 of the act and applicable clauses of these rules.
- 2.8.5 If, as a result of the survey any defect is noticed in the vessel or in any part thereof or in any machinery or article therein.
- a) Intimation of such defect shall be given to the applicant with a direction to rectify such defect within the period to be specified in such intimation. Form 5.
  - b) On receipt of information from the applicant regarding rectification of such defects, further survey shall be made within 7 working days

and during survey, the surveyor shall, before giving the declaration referred to in section 7 of the Act, satisfy himself as to the rectification of such defect.

- c) The surveyor in charge shall not give the declaration referred to in section 7 of the Act unless and until the defect is rectified as directed by him.

2.8.6 Where a vessel is offered for survey in pursuance of an application in that behalf by the owner is withdrawn by the owner owing to any default or any other act or conduct by the owner and the survey is hindered or made impossible no survey of the vessel shall be made based on the application; provided that nothing in this sub rule shall prevent the owner from filing a fresh application for survey.

2.8.7 The surveyor shall, as and when so required by the Administration, furnish to the Administration such information as he has in respect of any vessel and if he is not in possession of such information, he shall obtain such information from the owner or master and furnish it to the Administration.

2.8.8 The owner or master of the vessel shall be bound to give such information on a requisition in that behalf by the surveyor.

2.8.9 Notwithstanding anything contained in these rules, the surveyor is authorized to go on board any vessel and inspect it or any part thereof or any machinery or article thereon relevant to the purpose of the Act, if such inspection becomes necessary for or in connection with any of the purpose of the Act.

2.8.10 No surveyor shall enter a vessel for the purpose of survey of the vessel under the Act except under a notice to the owner or master of the vessel. Such survey shall be carried out in the presence of owner's representative (s) during daytime, preferably from sunrise to sunset except when demanded otherwise by circumstances involving exigencies / emergencies.

## **2.9 Declaration of Survey:-**

2.9.1 The declaration referred to in section 7 of the Act shall be in a Form 6 and shall be given in duplicate forthwith upon satisfactory completion of Survey.

**Declaration of  
Survey**

- 2.9.2 The owner or master to whom the declaration is given shall within fourteen days after the date of receipt thereof, sends the declaration to such officer, as the Administration may be notification appoint in this behalf.
- 2.9.3 If the owner or master fails to send a declaration as required by section
- 2.9.4 Above (sub section 8(1) of the Act), he shall forfeit s sum as prescribed in the Act.
- 2.9.5 The surveyor giving such a declaration shall obtain from the owner or master of the vessel the current or expired certificate of survey in respect of the vessel and forward the same to the Chief Surveyor with information regarding the survey made by him of the vessel and regarding the declaration given by him to the owner under section 7 of the Act.

**2.10 Notice regarding Certificate of Survey:-**

A notice under clause (b) of sub-section (1) of section 9 of the Act shall be in Form 7 and shall contain the particulars specified therein.

**Notice  
Regarding  
Certificate of  
Survey**

**2.11 Application for certificate of Survey:-**

An application for a certificate of survey shall be made to such officer authorized under sub section (2) of section 9 of the Act in Form 8 and shall contain the particulars specified therein. In case State Government sets up State Maritime Board / Authority / Commission under section 9 (4) of the Act, such body may be empowered for overall development of maritime activities in the State including authorizations under sub section (2) of section 9 of the Act.

**Application  
for Certificate  
of Survey**

**2.12 Certificate of Survey:-**

The certificate of survey in respect of class A vessels shall be in Form 9 and in respect of class B vessels shall be in Form 10 and shall contain the details specified therein.

**Certificate of  
Survey**

**2.13 Temporary Permit:-**

The Surveyor who conducted the survey may, without following the procedure laid down in section 9 of the Act, grant a permit to be effective for a period which shall not in any case exceed forty-five days, to authorize the inland mechanical propelled vessel to proceed on voyage or use in service temporarily pending the issue of the certificate of survey.

**Temporary  
Permit**

**2.14 Certificate of survey to be affixed in conspicuous part of mechanically propelled vessel:-**

The owner or master of every mechanically propelled vessel, for which a certificate of survey has been granted, shall forthwith, on the receipt of the certificate, cause one of the duplicates thereof to be affixed and kept affixed so long as it remains in force and the mechanically propelled vessel is in use, on some conspicuous part of the mechanically propelled vessel where it may be easily read by any persons on board.

**Display of  
Certificate of  
Survey**

**2.15 Term of certificates of Survey:-**

Any Certificate of Survey issued under the provisions of this Chapter shall be Subject to terms of certificate of survey contained in section 11 of the Act.

**Terms of  
Certificate of  
Survey**

**2.16 Change of name:-**

2.16.1 Where a change of name of a vessel in respect of which a certificate of survey has been granted under the Act is required, the owner or master of the vessel shall forward the certificate of survey to the authority who issued the certificate along with an application for change of name of the vessel entered in the certificate of survey.

**Change of  
Name**

2.16.2 Such application shall be in Form 11 and shall be contain the particulars required therein.

2.16.3 Such officer shall, after due enquiry by himself or through any other officer satisfy that the new name is not allotted to any other vessel and cause such change as is necessary to be effected in the certificate of survey, which shall thereupon be returned to the owner after due process of carving / marking of the changed name on vessel and upon due changes effected by the Registering Authority in Registration Certificate and Book of Registration.



**2.17 Renewal of certificates of survey:-**

After a certificate of survey has ceased to be in force, the same shall only be renewed after a fresh survey of the mechanically propelled vessel to which the certificate relates, has been held in accordance with the provisions of this Chapter, save so far as any relaxation thereof may be prescribed.

**Renewal of  
Certificate of  
Survey****2.18 Suspension or Cancellation of certificate of Survey:-**

A certificate of survey or any endorsement thereon made under section 10 A of the Act may be suspended or cancelled by the Administration, if that Administration has reason to believe:

**Suspension or  
Cancellation  
of Certificate  
of Survey**

- (a) That the declaration by the surveyor of the sufficiency and good condition of the hull, engines or other machinery or of any of the equipment of the mechanically propelled vessel has been fraudulently or erroneously made; or
- (b) That the certificate has otherwise been granted upon false or erroneous information; or
- (c) That since the making of the declaration the hull, engines or other machinery, or any of the equipment of the mechanically propelled vessel have sustained any material injury, or have otherwise become insufficient.

**2.19 Delivery of expired or cancelled certificate:-**

- 2.19.1 The owner or master of every mechanically propelled vessel, for which a certificate of survey has expired or has been cancelled shall cause certificate of survey, which has expired or has been suspended or cancelled, to be delivered up to officer who had issued the certificate of survey.

**Delivery of  
Expired or  
Cancelled  
Certificates of  
Survey**

- 2.19.2 Where an endorsement on any certificate of survey for the State has been suspended or cancelled, the certificate of survey to be delivered up to such officer who had issued the endorsement in order that particulars of the suspension or cancellation of the endorsement may be noted on the certificate.

**2.20 Report of suspension or cancellation of certain certificates:-**

If the Government suspends or cancels endorsement made under section 10 A of the Act on a certificate of survey, it shall report the fact of suspension or cancellation, together with the reasons thereof, to the State Government which (or whose delegate) granted the certificate.

**Reporting  
Suspension or  
Cancellation of  
Certificates  
issued by other  
Government**

**2.21 Survey by two surveyors:-**

2.21.1 A survey shall ordinarily be made by one surveyor, but two surveyors may be employed if the Government, by order in writing, so directs at any place of survey, or especially in the case of any particular mechanically propelled vessel or class of mechanically propelled vessel at any such place.

**Survey by  
Two  
Surveyors**

2.21.2 If the surveyor making a survey of a mechanically propelled vessel refuses to give a declaration under section 7 of the Act with regard to the mechanically propelled vessel, or gives a declaration with which the owner or master of the mechanically propelled vessel is dissatisfied, the State Government may, on the application of the owner or master, and the payment by him of fee twice the amount of the fee payable for the previous survey, direct two other surveyors to survey the mechanically propelled vessel.

2.21.3 The surveyors so directed shall forthwith survey the mechanically propelled vessel, and may, after the survey, either refuse to give a declaration or give such declaration as, under the circumstances, seems to them proper.

2.21.4 Any declaration given, or any refusal to give a declaration under sub-section 17(2) of the Act shall be final.

2.21.5 When a survey is made by two surveyors under either section 16 or section 17 of the Act each of the surveyors shall perform the prescribed portion of the duties assigned to a surveyor by the Government.

**CHAPTER -III****REGISTRATION OF INLAND MECHANICALLY PROPELLED VESSELS****3.1 Application:-**

- 3.1.1 Every certificate of registry and every certificate of survey issued in respect of a mechanically propelled vessel under the Merchant Shipping Act, 1958, shall be valid and effective as a certificate of registration or certificate of survey, as the case may be, issued under the Act and the relevant provisions of the Act shall apply in relation to such vessel as they apply to an inland mechanically propelled vessel registered under these rules and the Act. **Application**
- 3.1.2 An inland vessel required to be registered by the Act may be detained until the Master of the vessel, if so required, produces a certificate of registry in respect of the vessel.

**3.2 Registering Authority:-**

- 3.2.1 No person shall be appointed as Registering Authority unless he meets the qualifications and experience enumerated in any one of the following: **Registering Authorities**
- a) Possesses a degree or equivalent in Marine Engineering and Ministry of Transport First Class certificate of competency issued by Director General of Shipping, Government of India or equivalent certificate recognized by Government of India with 5 years sailing experience at Management Level. **Qualification**
- or**
- b) Master Mariner with 5 years' experience as surveyor with Directorate General of Shipping / Inland Water Transport Department / State Maritime Board.
- 3.2.2 The Registering Authority shall:- **Functions and Duties**
- a) Ensure that all documents as specified in rules 3.5 are received and are in order.
- b) Conduct enquiry after giving a notice to the applicant in forming the date and time of enquiry.

- c) For the purpose of such enquiry the authority shall be competent to:-
- I.** Inspect the vessel or any part thereof or any machinery thereon or any article there in relevant to the purpose of such enquiry
  - II.** Call for any record from the owner or master of the vessel and examine it in so far as such records are relevant for the purpose of such enquiry.
  - III.** Have such assistance as he deems fit for the purpose of such inspection.
- d) Issue / deny certificate of registration and maintain all records related to registration of vessels.
- e) Inspect any vessel under his jurisdiction, or get it inspected by an officer appointed on his behalf at any time and to suspend the registration of the vessel if satisfied that she is not fit to ply in Inland Waters.
- f) Cancel certificate of registration after necessary formalities, if found necessary.
- g) Issue duplicate copy of certificates issued by the authority.
- 3.2.3 Every person appointed as a registering authority shall, for the purposes of any registration made by him, be deemed to be a public servant within the meaning of the Indian Penal Code.

### **3.3 Book of registration:-**

- 3.3.1 At every place of registry, a book shall be kept by the registering authority in the Form 12 in which all the particulars contained in the form of the certificate of registration, shall be duly entered.
- 3.3.2 The book of registration shall be kept in bound volumes with machine numbered pages.
- 3.3.3 Registering authority shall, immediately after registering any inland mechanically propelled vessels or within one month at the furthest, send to the State Government a true and exact copy, together with the number of every certificate which shall be so granted by it.

### **Book of Registration**

**3.4 Application for registration:-**

An application for registration of an inland mechanically propelled vessel shall be made by the owner or master of the vessel in Form 13 and shall contain such particulars as required therein and shall be accompanied by:-

**Application  
for  
Registration**

- a) A statement by the owner that the provisions of the Act and these rules have been complied with;
- b) In the case of a newly built vessel, the builder's certificate and inspection certificate issued by the surveyor along with approved drawing of the vessel, documents relating to purchase of the vessel and document of its ownership. In case of a new vessel under construction the builder's certificate may be submitted forthwith upon issue by the respective organization / authority after the completion of the vessel.
- c) In the case of renovated vessels, builder's certificate and inspection certificate issued by the surveyor along with approved drawing of the vessel and document of its ownership.
- d) A duplicate of the certificate of survey if issued by the authority;
- e) Challan receipt evidencing payment of such fees as decided by the Administration for the registration of the vessel or as prescribed under section 19R (e) of the Act;
- f) Copy of insurance certificate submitted forthwith when the vessel is insured as per Chapter 7 of these rules before plying / trading. (Note: The vessel will be insured after registration is done and insurance company is given the identity (registration) of the vessel and survey certificate copies).

**3.5 Fees Payable:-**

- 3.5.1 The fees payable under the Act shall be as by the Administration.
- 3.5.2 Any fees payable under the Act or under these rules shall be paid by remittance into a Government Treasury / Bank or otherwise as notified to the credit of the Government under such head of account as the Government may specify from time to time.
- 3.5.3 No fee paid under the Act or these rules shall be refundable.

**Fees for  
Registration**

**3.6 Places of Registration:**

- 3.6.1 Every application for registration shall be made on a registering authority of the Place of Registry within the local limits of whose jurisdiction the owner of the inland mechanically propelled vessels ordinarily resides or carries on business.
- 3.6.2 Where the owner applying for a certificate of registration is a company within the meaning of section 3 of the Companies Act, 1956, the application may be made to a registering authority within the local limits of whose jurisdiction the principal office of the company is situated.
- 3.6.3 Notwithstanding anything contained in this section, an inland mechanically propelled vessel may be registered by a registering authority in the State, although the owner does not ordinarily reside or carry on business in the State or, if a company, the principal place of business of the company is not situated in the State, provided that the Government to the State in which the owner ordinarily resides or carries on business, or in the case of a company the Government of the State where the principal places of business of the company is situated has accorded its previous approval thereto and such approval accompanies Application of Registration in addition to documents stated in section 3.4.

**Places of  
Registration****3.7 Procedure for Registration:-**

- 3.7.1 The owner of an inland vessel wishing to have it registered at a place of registry in the State shall make an application for registration and submit to the concerned Registering Authority:-
- a) A declaration of ownership – in the prescribed Form 14
  - b) A certificate signed by the builder (builder's certificate) of the vessel containing a true account of the proper dimensions / particulars and of the tonnage of the vessel as estimated by him and the time, when and the place where the vessel was built, (for new vessel).
  - c) The instrument of sale under which the property of the vessel was transferred to the applicant who requires it to be registered in his name, (for second hand vessel).

**Procedure  
for  
Registration**

- d) To give a minimum of 14 days' notice to the Registering Authority of the name proposed for the vessel. The Registering Authority on receipt of the application for registration of the vessel shall approve the name after ensuring from the records that there is no other vessel in the same name and shall allot an official number for the vessel.

3.7.2 On being satisfied that the inland vessel, on the strength of the evidence placed before hi, is entitled to be registered at the place of registry, the Registering Authority shall give a notice to the applicant in format as prescribed in Form 15, informing him of the time and date of the enquiry in respect of the vessel.

For the purpose of enquiry under these rules, it shall be competent for such authority:-

- a) To inspect the vessel or any part thereof or any machinery therein or any article therein relevant to the purpose of such enquiry;
- b) To call for any record from the owner or master of the vessel and examine it in so far as such records are relevant for the purpose of such enquiry and
- c) To have such assistance as it deems fit for the purpose of such inspection.

3.7.3 The owner, the master and every member of the crew of the vessel shall afford to such authority al reasonable facilities for the enquiry and furnish such information as the authority requires for the purpose of such inquiry.

3.7.4 After the formalities enumerated above have been gone through, the Registering Authority issues a carving and marking note in the format as prescribed in Form 16. This note is to be returned to the Registering Authority after carving and marking have been duly carried out on the vessel in the prescribed manner and certificate by a Surveyor. The carving and marking is to be done as detailed in 3.10 below.

3.7.5 On completion of the preliminaries to registry as described in the preceding paragraphs, the Registering Authority enters in the Book of Registration the particulars of the inland vessel such as:

- a) Name of the vessel and the place of registry.
- b) Details contained in the Certificate of Survey.
- c) Particulars respecting her origin as revealed in the declaration of ownership
- d) The name and description of her registered owner and, if there are more owners than one, the number of shares owned by each of them;

### **3.8 Grant of certificate of registration:-**

#### **Grant of Certificate of Registration**

- 3.8.1. If, in respect of any inland mechanically propelled vessel, the registering authority, after making such inquiry as in sub-rule 3.7 of these rules, thinks fit, is satisfied that the provision of the Act or of any rules made here under have been complied with, it shall grant to the applicant thereof a certificate of registration retaining the Surveyor's certificate, builders certificate, instrument of sale by which the ship was sold, and the declaration of ownership. The certificate may also be in electronic form like smart card, in place of conventional paper certificate.
- 3.8.2 In special circumstances and for reason to be recorded in writing the registering authority may grant a temporary pass to an inland vessel to enable it to ply during the period of the preparation of certificate or registration. The pass shall be valid for the time and within the limit there in mentioned. The said pass shall be valid for 30 days and shall have the same effect as a certificate of registration subject to the conditions laid down in the pass.
- 3.8.3 It shall be the duty of the owner or master of the inland vessel to produce Certificate of Registration on demand by authority engaged in the enforcement of Act and rules.
- 3.8.4 A registered authority may refuse to register an inland mechanically propelled vessel, if she is found to be mechanically defective, or if the applicant fails to furnish satisfactory evidence in support of any of the statements made in his this application.



- 3.8.5 Provided that where the registering authority refuses to register any inland mechanically propelled vessel, it shall furnish to the applicant a statement in writing containing the reasons for such refusal.

**3.9 Duplicate of the certificate:-**

- 3.9.1 The authority which issued the certificate of registration shall issue a duplicate of the certificate of registration to replace a certificate lost, destroyed or mutilated.

**Duplicate  
Certificate of  
Registration**

- 3.9.2 Provided that no such duplicate certificate shall be issued unless:-

- a) In the case of a certificate lost, it is proved to the satisfaction of the Registering Authority that all measures possible for tracing out the certificate have been exhausted;
- b) In case of a certificate destroyed, such authority is satisfied after due enquiry that the certificate has actually been destroyed; and
- c) In case of mutilated certificate, the owner delivers up such certificate to such authority.

- 3.9.3 Every duplicate of the certificate shall, on the face of it, be stamped with the word duplicate in red ink.

- 3.9.4 In the case of a certificate lost if, subsequent to the issue of a duplicate certificate, the original certificate is found, the later shall be delivered up to the issuing authority that shall cancel the certificate and record the same.

**3.10 Marking of Inland mechanically propelled vessels:-**

- 3.10.1 Where an inland mechanically propelled vessel has been registered under this Chapter, the registering authority shall assign to the vessel, to be displayed thereon conspicuously registration mark comprising of registration number, port of registry and name of Vessel as described in following sub sections of this section.

**Markings of  
Vessels**

- 3.10.2 Every registered vessel shall bear the following identification marks on its hull:-

- A. Name of vessel:-Name shall be inscribed on each bow and stern of the mechanically propelled vessel. In the case of dumb barges / vessels name and official number on each bow;
- B. Registration No and year of registration on the main super structure and / or engine room bulk head / main beam in mechanically propelled vessels.
- C. Place / Port of registry on the stern / transom.

3.10.3 The identification mark shall be inscribed not less than 200 mm x 150 mm (height x breadth) with each letter 25 mm wide and shall be curved / marked / welded in light color on a dark background or in a dark color on a light background.

3.10.4 Inland Vessels registration marks and the number denoting its gross tonnage shall be curved / marked on its main beam or any permanent bulkhead at a prominent place.

3.10.5 Additionally, every vessel shall be painted and displayed on a fixed board, exhibited on the upper deck, the following information;

- a) Gross tonnage;
- b) Maximum permissible number of passengers;
- c) Name of the owner;
- d) Date of last survey,
- e) Loaded draft and dead weight ton in case of cargo vessels.

3.10.6 Inland vessels load line shall be curved / marked / welded Plimsoll mark on port and starboard side where practicable on vessels above 20 meter in length and in case of small vessels / crafts a load line mark shall be curved / marked / welded 300 mm long and 25 mm wide and shall coincide with maximum draught level of the inland vessel in fair weather conditions.

3.10.7 Scale of draught marks shall be curved / marked / welded in meters and millimeters / decimeters, forward and aft of Inland vessels on both the port and the starboard side and on mid ship in particular on cargo vessels above 20 meters in length with Plimsoll mark.

**3.11 Prohibition against transfer of certificate of registration:-**

3.11.1. A certificate of registration granted in respect of any inland mechanically propelled vessel shall be used only for the lawful navigation of that vessel.

3.11.2 A certificate of registration in respect of an inland mechanically propelled vessel issued by a registering authority in the State shall be valid for the State only, but where any such vessel plied in inland waters of any other State, nothing in this section shall be deemed to require the owner or master of the vessel to obtain a fresh certificate of registration in relation to the State or States in which the vessel is not so registered.

3.11.3 When an inland mechanically propelled vessel registered in another State has been kept in the State for a period exceeding thirty six months, the owner or master of the vessel shall make an application under section 19K of the Act to the registering authority, within whose jurisdiction the vessel then is, for the transfer of registry from the registering authority of the place where the vessel is registered.

**Prohibition  
against  
transfer of  
certificate of  
registration**

**3.12 Registration of alterations:-**

3.12.1 No alteration to a vessel shall be made without obtaining sanction from the Registering Authority.

3.12.2 Subsequent to obtaining the sanction of the registering authority in sub rule 3.12.1, when an inland mechanically propelled vessels is so altered as not to correspond with the particulars relating to her or the description entered in the certificate of registration, then the owner of the vessel shall, within 30 days, make a report of such alteration to the registering authority of the place where the vessel is registered.

3.12.3 The report under sub-section 3.12.2 shall be made in Form 17 and shall contain such particulars with respect to the alteration as may be prescribed and shall be accompanied by the certificate of registration in force in respect of the vessel at the time of the report.

3.12.4 The registering authority, on receipt of the report under sub-rule 3.12.1 and on payment of the prescribed fee as per by the Administration, shall either cause the alternation to be registered or direct that the vessel be registered a new.

**Registration  
of  
alterations**

3.12.5 The registering authority in deciding whether alteration will be recorded or whether the inland vessel should be registered a new shall be guided by the following considerations:-

- a) Whenever any material alteration is made in the hull affecting the length or breadth or depth of the inland vessel or wherever there is alteration in the means of propulsion including addition or removal of an auxiliary engine the vessel shall require new registration.
- b) Where the alteration consists merely of a change in the dimensions of close in space, the addition or removal of poop or deckhouse etc. or an allowance or disallowance or crew space of other similar changes or an alteration from motor or steam crew to another motor or steam crew or reverse. The registering authority may allow such alteration to be recorded provided the stability of the vessel is not endangered there by.

3.12.6 Provided that where the registering authority directs that the vessel be registered a new, it shall either grant a provisional certificate describing the vessel as altered or provisionally endorse the particulars of the alteration on the existing certificates.

3.12.7 Any provisional certificate granted or endorsement made under the provisions of this section shall be valid for a period of one month from the date thereof, within which period the owner shall cause all necessary steps to be taken to have the vessel registered a new.

### **3.13 Transfer of registry:-**

3.13.1 The registry of an inland mechanically propelled vessel may be transferred from one place in a State to another place in another State on the application in the prescribed format as in Form 18 by the owner or master of the vessel to the registering authority of the State in which the vessel is kept.

3.13.2 On receipt of such application, the registering authority shall transmit notice thereof to the registering authority of the place where the vessel is registered, who shall communicate no objection or otherwise to such transfer within a fortnight or earlier.

**Transfer of  
registry**

- 3.13.3 The certificates of registration in respect of the vessel shall be delivered up to the registering authority of the intended place of registry along with the application.
- 3.13.4 On receipt of the application under sub-rule 3.13.1 and fee which is decide by the Administration, the registering authority of the intended place of registry shall enter in its register book, all the particulars relating to the vessel and grant a fresh certificate of registration in respect of the vessel and hence forth such vessel shall be considered as registered at the new place of registry.
- 3.13.5 A State Government may make rules under section 19R of the Act requiring the owner or master of an inland mechanically propelled vessel not registered within the State which is brought into or is, for the time being in the State, to furnish to a prescribed authority in the State such information with respect to the inland mechanically propelled vessel and its registration as may be prescribed.

### **3.14 Transfer of vessel:-**

- 3.14.1 If a vessel is transferred to any person, whether resident within the State or not, the transferor and the transferee shall make joint report of the transfer to the registering authority within whose jurisdiction the transferee resides or carries on business within thirty days of such transfer along with a challan or deposit receipt evidencing payment of fees decide by the Administration, for such transfer.
- 3.14.2 Provided that no transfer shall be made to any person resident in another State or in any country outside India, without the previous approval of the Government.
- 3.14.3 The certificate of registration in respect of the vessel shall also be surrendered along with the report referred to in sub-rule 3.14.1 in order that the particulars of the transfer of the ownership may be entered thereon.

**Transfer of  
vessel**

**3.15 Change of residence or place of business:-****Change of  
residence or  
place of  
business**

3.15.1 If the owner of an inland mechanically propelled vessel ceases to reside or carry on business at the address recorded in the certificate of registration of the vessel, he shall, within thirty days of the change of address, intimate his new address to the registering authority by which the certificate of registration was granted, or if the new address is within the jurisdiction of another registering authority, to that registering authority, and shall at the same time forward the certificate of registration to the registering authority in order that the new address may be entered thereon.

3.15.2 Where a registering authority other than the original registering authority makes any such entry, it shall communicate the new address to the original registering authority.

**3.16 Prohibition against transfer of ownership of registered vessel:-****Prohibition  
against  
transfer of  
ownership of  
registered  
vessel**

3.16.1 An inland mechanically propelled vessels registered under this Act in one State shall not be transferred to a person resident in another State in India or in any country outside India, without the previous approval of the Government of the State in which the vessel is registered;

3.16.2 Provided that where an inland mechanically propelled vessel is registered or deemed to be registered under the Merchant Shipping Act, 1958 this sub-section shall have effect as if for the words – the Government of the State in which the vessel is registered the words – the Central Government had been substituted.

3.16.3 Subject to the provisions of sub-rule 3.16.1, the owner of an inland mechanically propelled vessels registered under the Act and the transferee there of shall, within thirty days of the transfer of ownership of the said vessel to the transferee, jointly make a report of the transfer to the registering authority within the local limits of whose jurisdiction the transferee resides or carries on business and shall also forward the certificate of registration to that registering authority, together with the prescribed fee, in order that particulars of the transfer of ownership may be entered thereon.

**3.17 Suspension of certificate of registration:-**

- 3.17.1 A registering authority may suspend, for such period and subject to such conditions as it thinks fit, the certificate or registration of an inland mechanically propelled vessels, if it has reason to believe that after the granting of the certificate the vessel has become unfit to ply in inland waters.
- 3.17.2 Where the registration of an inland mechanically propelled vessel is suspended under sub-rule 3.17.1, the registering authority ordering the suspension shall, if it is not the original registering authority, inform that other authority of the fact of such suspension.
- 3.17.3 The registering authority suspending the certificate may require the owner or master of the vessel to deliver up the certificate so suspended to itself or, if it is not the original registering authority, to that other authority.
- 3.17.4 A certificate of registration surrendered under this section shall be returned to the owner when the order suspending the certificate has been rescinded or has been ceased to operate.

**Suspension  
of certificate  
of  
registration**

**3.18 Cancellation of registration:-**

- 3.18.1 If an inland mechanically propelled vessel has been destroyed or has been rendered permanently unfit for service, the owner of the vessel shall, with the least practicable delay, report the fact to the registering authority of the place where the vessel is registered and shall also forward to the authority, along with the report, the certificate of registration of the vessel and there upon the registering authority shall have the certificate of registration cancelled.
- 3.18.2 The registering authority or any officer authorized by the State Government in this behalf may go on board, detain, or inspect any vessel at any hour for the purpose of satisfying himself that the provisions of the Act, are being complied with. It shall be the duty and responsibility of the owner or master of the inland vessel to give all reasonable assistance to the inspecting officer in carrying out the inspection and to comply with any lawful direction that he may give.

**Cancellation  
of  
registration**

- 3.18.3 In case any inland vessel is detained a report of the circumstances in which the detention is ordered shall be sent to the registering authority and the Administration within forty eight hours.
- 3.18.4 The registering authority at any time, if satisfied that the vessel is in a condition not fit to ply in the Inland water, suspend the registration of the vessel and require the owner thereof to surrender forth with certificates of survey and registration in respect of that vessel.
- 3.18.5 No certificate shall be suspended under section 19 N of the Act without giving owner a reasonable opportunity of being heard in respect of the grounds on which the suspension of the certificate is proposed.

### **3.19 Appeals:-**

3.19.1 Any person aggrieved by an order:-

- a) Refusing to register any inland mechanically propelled vessel under section 19F of the Act; or
- b) Suspending a certificate of registration under section 19N of the Act;
- c) Cancelling a certificate of registration under sub-rule (2) of section 19O of the Act, may within thirty days of the date on which he receives notice of such order, appeal against it to the State Government who in turn may appoint an appellant authority other than registering authority.

### **Appeals**

3.19.2 Every such appeal shall be in Form 19 and shall contain the particulars required there in.

3.19.3 The appeal shall be accompanied by the following, namely:-

- a) Two copies of order appealed against; (of which at least one shall be the original or an attested copy)
- b) Challan receipt evidencing payment of the fee for the appeal as decide by the Administration;
- c) Such other records as are necessary for the disposal of the appeal

3.19.4 The notice of appeal referred to in sub-rule (2) of section 19 P of the Act shall be in Form 19 and shall contain the particulars specified therein;

3.19.5 The notice shall be communicated to the registering authority through post or through a messenger or by any other method which has the effect of communicating the notice.



**3.20 Reciprocity:-****Reciprocity**

- 3.20.1 Where the Central Government is satisfied that by the law or practice of any country outside India, inland mechanically propelled vessels having a certificate of registration in force under this Act.
- (a) Obtain by reason of such registration any special exemption in that country while plying in the inland waters thereof, or
- (b) Are required as a condition of plying in the inland waters of that country to comply with any special requirement, whether by way of registration a new or payment of a fee or otherwise.
- 3.20.2 The Central Government, may by notification in the Official Gazette, for the purpose of reciprocity, direct that the same exemption or requirement, or an exemption or a requirement as similar thereto as may be granted to, or imposed upon, inland mechanically propelled vessels registered in that country while plying in the inland waters of the territories to which this Act extends.

**3.21 Mortgage of mechanically propelled inland vessel or share:-****Mortgage**

- 3.21.1 Mortgage of inland mechanically propelled vessel or share:-
- 1) A registered inland mechanically propelled vessel or a share therein may be made a security for a loan or other valuable consideration, and the instrument creating the security (called mortgage) shall be in the prescribed form or as near thereto as circumstances permit, and on the production of such instrument the Registering Authority of the inland mechanically propelled vessels port of registry shall record it in the Book of Registration and endorse the same in the Certificate of Registry.
- 2) Mortgages shall be recorded by the Registering Authority in the order in time in which they are produced to him for that purpose, and the Registering Authority shall, by memorandum under his hand, notify on each mortgage that it has been recorded by him stating the day and hour of that record.
- 3.21.2 Entry of discharge or mortgage- Where a registered mortgage is discharged, the Registering Authority shall, on the production of the mortgage deed with a receipt for the mortgage money endorsed thereon, duly signed and attested, make an entry in the Book of Registration to the effect that the mortgage has been discharged, and on

that entry being made the estate, if any, which passed to the mortgagee shall vest in the person in whom (having regard to intervening acts and circumstances, if any) it would have vested, if the mortgage had not been made.

3.21.3 Priority of mortgage- If there are more mortgages than one recorded in respect of the same inland mechanically propelled vessel or share, the mortgagees shall, notwithstanding any express, implore or constructive notice, have priority according to the date on which each mortgage is recorded in the Book of Registration and not according to the date of each mortgage itself.

3.21.4 Mortgagee not deemed to be owner- Except in so far as may be necessary for making a mortgaged inland mechanically propelled vessel or share available as a security for the mortgage debt, the mortgagee shall not, by reason of his mortgage, be deemed to be the owner of the inland mechanically propelled vessel or share, nor shall the mortgagor be deemed to have ceased to be owner thereof.

3.21.5 Rights of Mortgagee:-

- 1) Where there is only one registered mortgagee of an inland mechanically propelled vessel or share, he shall be entitled to recover the amount due under the mortgage by selling the mortgaged inland mechanically propelled vessel or share without approaching the High Court. Provided that nothing contained in this sub-section shall prevent the mortgagee from recovering the amount so due in the High Court as provided in sub-rules (2) below.
- 2) Where there are two or more registered mortgagees of an inland mechanically propelled vessel or share they shall be entitled to recover the amount due under the mortgage in the High Court, and when passing a decree or thereafter the High Court may direct that the mortgaged inland mechanically propelled vessel or share be sold in execution of the decree.
- 3) Every registered mortgagee of an inland mechanically propelled vessel or share who intends to recover the amount due under the mortgage by selling the mortgaged inland mechanically propelled vessel or share under sub-rules (1) shall give, an advance notice of fifteen days relating to such sale to the Registering Authority of the inland mechanically propelled vessels port of registry.

- 4) The notice under sub-rules (3) shall be accompanied with the proof of payment of all wages and other amounts due to seamen in connection with their employment on that vessel.

3.21.6 Mortgage not affected by insolvency:- A registered mortgage of an inland mechanically propelled vessel or share shall not be affected by any act of insolvency committed by the mortgagor after the date of the record of such mortgage, notwithstanding that the mortgagor, at the commencement of his insolvency, had the inland mechanically propelled vessel or share in his possession, order or disposition, or was the reputed owner thereof, and the mortgage shall be preferred to any right, claim or interest therein of the other creditors of the insolvent or any trustee or assignee on their behalf.

3.21.7 Transfer of mortgages:-

- 1) A registered mortgage of an inland mechanically propelled vessel or share may be transferred to any person and the instrument effecting the transfer shall be in the prescribed form or as near thereto as circumstances permit, and on the production of such instrument, the Registering Authority shall record it by entering in the Book of Registration the name of the transferee as mortgagee of the inland mechanically propelled vessel or share and shall, by memorandum under his hand, notify on the instrument of transfer that it has been recorded by him stating the day and hour of the record.
- 2) The person to whom any such mortgage has been transferred shall enjoy the same right or preference as was enjoyed by the transferor.

3.21.8 Instrument creating a mortgage of a vessel or a share therein shall be in Form 20.

3.21.9 Instrument creating a transfer of a mortgage or a share therein shall be in Form 21.

3.21.10 Instrument creating the discharge of mortgage shall be in Form 22.

**CHAPTER - IV****MASTERS INCLUDING SERANGS AND ENGINEERS INCLUDING ENGINE –  
DRIVERS OF INLAND MECHANICALLY PROPELLED VESSELS****4.1 Minimum Crew / Manning**

- 4.1.1 Every inland vessel registered under these rules shall have minimum **Minimum Manning** on-board to ensure safety of the vessel, passengers / cargo and environment. The minimum manning applicable to each vessel shall be prescribed by the Surveyor in its Certificate of Survey and shall take in to account the type and size of the vessel, its operating area, engine capacity and any other factor considered necessary.
- 4.1.2 For the purpose of this chapter, the vessels may be classified into categories as follows:-
- a) **Category A:-** All Inland Vessels constructed for operating / operating in Zone 1
- b) **Category B:-** All Inland Vessels other than Category A.
- 4.1.3 (a) Every inland vessel shall have on board minimum following crew when in operation:-

|                   | <b>Vessels &lt; 226 BHP</b>  | <b>226 BHP &lt; Vessels &lt; 565 BHP</b>  | <b>Vessels &gt; 565 BHP</b>   |
|-------------------|--|---|---|
| <b>Category A</b> | a) One master with Master Class 3/ Serang certificate<br>b) One engineer with Engine Driver Class 2 certificate<br>c) Three General Purpose Ratings for attending duties of deck hands, engine hands & cooking | a) One master with Master Class 2 certificate<br>b) One engineer with Engine Driver Class 1 certificate<br>c) Three General Purpose Ratings for attending duties for deck hands, engine hands & cooking | a) One master with Master Class 1 certificate.<br>b) One engineer with Engineer certificate / License Driver Certificate up to 960 BHP<br>c) Four General Purpose Rating for attending duties of deck hands, engine hands & cooking |

|                   |  |  |  |
|-------------------|--|--|--|
| <b>Category B</b> | a) One master with Master Class 3 / Serang certificate<br>b) One engineer with Engine Driver Class 2 certificate<br>c) Two General Purpose Rating for attending duties of deck hands, engine hands & cooking | a) One master with Master Class 2 certificate.<br>b) One engineer with Engine Driver Class 1 certificate.<br>c) Two General Purpose Ratings for attending duties of deck hands, engine hands & cooking | a) One master with Master Class 1 certificate<br>b) One engineer with Engineer certificate / License Driver Certificate up to 960 BHP.<br>c) Three General Purpose Rating for attending duties of deck hands, engine hands & cooking |
|-------------------|--|--|--|

4.1.3 (b) Every dumb craft of less than 15 m length shall be manned by minimum one General Purpose Rating and every dumb craft of 15 m or more in length shall be manned by minimum two General Purpose Ratings.

4.1.4 A mechanically propelled vessel less than 565 BHP shall be deemed to have complied with the requirements of master and engineer if she has as her master and engineer a person possessing both certificates and appropriate class.

4.1.5 The Surveyor may specify minimum manning of higher order than prescribed in sub rule 4.1.3 above if in his opinion other factors like nature of trade of the vessel, length of voyage necessitates such additional manning in the interest of Safety of life, property, environment and the inland waterways.

## **4.2 Appointment of Examiners & Examination Centers:-**

4.2.1 The Chief Examiner appointed by the Administration shall be responsible for the Examination and issue of Certificate of Competency to the persons desirous of obtaining such Certificates of Competency.

**Appointment  
of Examiners  
&  
Examination  
Centers**

4.2.2 The Chief Examiner shall be assisted by suitable number of Examiners appointed by the administration.

4.2.3 The places as decide by the Administration shall be the Examination Centers in the State for the purpose of this Chapter. The State Government may by notification in the Official Gazette bring about a change in the list of Examination Centers.

a) Each Examination center shall announce its Examination schedule for various Grades based on the assessment of local needs, ensuring adequate frequency of the examination so that the candidates do not have to wait for more than 6 months to appear in the examination from the date of application.

4.2.4 No. person shall be appointed as Chief Examiner unless he fulfils one of the following requirements of qualification and experience:

a) Possesses Extra Master Certificate of Competency issued by Director General of Shipping with minimum 5 years ship board experience as Certified Officer out of which minimum 3 years at Management Level.

**Qualification  
of Chief  
Examiner**

4.2.5 A Chief Examiner shall discharge the following duties;

a) Supervise overall conduct of examinations for various grades of Certificate of competency in the State.

b) Supervise overall issuance of various grades of certificates of competency.

c) Fix the frequency and schedule of examination for various grades of certificate of competency in State.

d) Frame guidelines for approval of Training Institutes offering Inland Vessel courses in the State.

e) Inspect and approve Training Institutes in the State desirous of offering Inland Vessel course in the State.

**Duties of  
Chief  
Examiner**

4.2.6 No person shall be appointed as an Examiner unless he fulfills the following requirements of qualification and experience:-

a) Possesses a Ministry of Transport Master (FG) or M. E. O. Class 1 Certificate of Competency issued by Director General of Shipping with minimum 5 years shipboard experience as Certificated Officer and 1 year command of FG Ship or 1 year as Chief Engineer on FG ship

**Qualification  
of Examiner**

- b) Chief Examiner with the approval of Administration may appoint MEO Class – II working with Administration as Examiner.

4.2.7 An Examiner shall discharge the following duties namely:-

- (a) Supervise and conduct examinations for various grades of Certificate of Competency at an examination center.
- (b) Issuance of various grades of certificates of competency.
- (c) Assist Chief Examiner in discharge of his duties and responsibilities

#### **4.3 Issuance of Certificate of Competency:-**

4.3.1 No candidate shall be granted a Certificate of Competency under these rules without passing the relevant examination of competency specified hereunder. The examination for each grade of Certificate of Competency shall comprise of oral examination. The syllabus for each grade of examination shall be as contained in Schedule - I.

**Issuance of  
Certificate  
of  
Competency**

4.3.2 The above clause does not apply to issuance of Certificate of Service issued under these rules.

4.3.3 A Certificate of competency may be issued for the following grades, namely:

i) Deck Department:-

- a) Master Class 1 Certificate
- b) Master Class 2 / License Master Certificate
- c) Master Class 3 / Serang Certificate

ii) Engine Department:-

- a) Inland Engineer Certificate
- b) Engine Driver Class 1 / License Driver Certificate
- c) Engine Driver Class 2 Certificate

#### **4.4 Master and Deck Department:-**

4.4.1 Examination for the grant of Certificate of Competency as inland vessel Master Class 1, Master Class 2 and Master Class 3 / Serang shall be held by the examiner at the places of examination in the State on such dates as may be published by the examination center.

**Master and  
Deck  
Department**

4.4.2 Every application for examination shall be filled and submitted in Form 23 appended to these rules together with copies of documents stated

therein. The application filled shall be received at the examination center as per the schedule announced before the date fixed for examination together with the supporting documents required for as certain ineligibility of the candidate detailed in sub-rules 4.4.3 to 4.4.6 herein.

**4.4.3 Minimum requirements for certification of Master Class 1 of an inland mechanically propelled vessel: Every candidate for certification as Master Class 1 shall:-**

**Master  
Class - I**

- i) Hold a valid Certificate of Competency as Master Class 2 of an inland mechanically propelled vessel issued under these rules.
- ii) Have served as Master Class 2 in-charge of an inland vessel of not less than 226 BHP for minimum of three years; **or** while possessing a Master Class 2 Certificate have served as Second Serang of an inland vessel for not less than four years; **or** hold Master / Chief Mate / Second Mate (Foreign Going) or Master / Chief Mate Near Coastal Voyage (NCV) / Home Trade granted under the Merchant Shipping Act, 1958 and have served as a Second in Command under a Master of an inland vessel for not less than one year; **or** have served not less than three years on sea-going vessels and three years as Mate (Sukhani) of an inland vessel; **or** have served not less than six years as a Mate (Sukhani) of an inland vessel;
- iii) Have successfully completed Inland Vessel Maneuvering Simulator course at National Inland Navigation Institute, Patna or from any other institute recognized by the State Government.
- iv) Produce a medical certificate as to his physical fitness in Form 24.
- v) Have successfully attended approved Preparatory Course for Master Class 1. The Preparatory Course for Master Class 1 is to be approved by Inland Waterway Authority of India or the State Government. The minimum course duration, contents and structures of the Preparatory Course for Master Class 1 shall be same as followed by National Inland Navigation Institute, Patna and amended by it from time to time.



- vi) Have completed the five basic courses for inland vessels approved by IWAI or DGS or State Government namely:-
  - a) Elementary First Air (EFA)
  - b) Proficiency in survival techniques (PST)
  - c) Personal safety and social responsibility (PSSR)
  - d) Fire Prevention and Fire Fighting (FPFF)
  - e) Security Training For Seafarers With Designated Security Duties (STSDSD)

**4.4.4 Minimum requirement for certification of Master Class 2 of an inland mechanically propelled vessel: Every candidate for certification as Master Class 2 shall:**

**Master  
Class - II**

- i. In possession of valid Master Class 3 / Serang Certificate of Competency issued under these rules.
- ii. Have served at least five years on inland vessels or sea-going vessels, the last three years of which must have been as Master Class 3 / Serang in an inland vessel with a Master Class 3 / Serang certificate granted under the Act **or** shall have served at least six years as a lascar / deck hand / General Purpose Rating in an inland vessel of not less than 226 Brake Horse Power (BHP).
- iii. Shall produce a medical certificate as to his physical fitness in Form 24.
- iv. Have successfully attended approved Preparatory Course for Master Class 2. The Preparatory Course for Master Class-II is to be approved by IWAI or State Government. The minimum course duration, contents and structure of the Preparatory Course for Master Class 2 shall be same as followed by NINI Patna and amended by it from time to time.
- v. Have completed the five basic courses for inland vessels approved by IWAI or DGS or State Government namely:-
  - a) Elementary First Air (EFA)
  - b) Proficiency in survival techniques (PST)
  - c) Personal safety and social responsibility (PSSR)
  - d) Fire Prevention and Fire Fighting (FPFF)

- e) Security Training For Seafarers With Designated Security Duties (STSDSD)

**4.4.5 Minimum requirements for certification of Master Class 3 / Serang of an inland mechanically propelled vessel:-** Every candidate for certification as Master Class 3 / Serang shall be:-

**Master  
Class - III**

- i) A Citizen of India
- ii) Not less than twenty years of age
- iii) Medically fit and produce a medical certificate as to his physical fitness in Form 24.
- iv) Have successfully attended approved Preparatory Course for Master Class 3 / Serang. The Preparatory Course for Serang is to be approved by IWAI or State Government. The minimum course duration, contents and structure of the Preparatory Course for Master Class 3 / Serang shall be same as followed by NINI Patna and amended by it from time to time.
- v) **Have completed the five basic courses for inland vessels approved by IWAI or DGS or State Government namely:**
  - a) Elementary First Air (EFA)
  - b) Proficiency in survival techniques (PST)
  - c) Personal safety and social responsibility (PSSR)
  - d) Fire Prevention and Fire Fighting (FPFF)
  - e) Security Training For Seafarers With Designated Security Duties (STSDSD)
- vi) **Only for Existing Lascars / Deck Hands (who have started service in inland vessels before these rules)**
  - a) Shall be 8<sup>th</sup> class pass from a board recognized by Central / State
  - b) Be able to read and write Hindi / English and Regional Language of the State.
  - c) Meeting any one of the following minimum service criteria – Four years' service on Inland vessels or sea going vessels having engine not less than 226 BHP **or** Five years on vessels having engine not less than 85 BHP **or** six years on vessel having engine not less than 40 BHP, one

year of which service shall be as helmsman or an Assistant Master (Deck) or Seacunny, or such candidates who have served on the vessels of Defense, Police, P. A. C. or other paramilitary forces for 5 years or more.

- d) Should have performed at least six months service as Lascar / Deck hand on board the vessel plying in ports / Inland Waters of the State.

**vii) For New Entrants Through Rating Route (which includes existing Lascars / Deck Hands / General Purpose Rating who meet these requirements:-**

- a) Passed 10<sup>th</sup> class examination from board recognized by Central / State Government.
- b) Successfully completed General Purpose Rating Course at National Inland Navigation Institute, Patna or similar training establishment approved by the State.
- c) Have minimum three years of services on Inland vessels or sea going vessels out of which one year of the service shall be as helms man or as sea cunny.

**viii) For New Entrants Through Cadet Training Route.**

- a) Such candidate who have passed class 12<sup>th</sup> class examination from board recognized by Central/State Government.
- b) Successfully complete Inland Vessel Cadet Training at National Inland Navigational Institute (NINI), Patna or similar training establishment approved by the State.
- c) Shall have two years of services on Inland vessels or sea going vessels provided the total service has been performed as Inland Vessel cadet apprentice with onboard vessels Structured Training Program verified in record book and approved or conducted by National Inland Navigation Institute or State approved training establishment and should have performed at least six months watch keeping service under qualified Master class 1 / 2 / 3 Serang on board the vessel plying in the port / Inland Vessels of the State.

4.4.6 A candidate who has served as a master, or as an engineer of a vessel of the Coast Guard, Indian Navy or regular Army for a period of 5 years may be granted a certificate of service as a first-class master, second-class master or serang, depending on the size of vessel served and on successful completion of relevant preparatory course including the five basic courses from National Inland Navigation Institute, Patna or from any other institute recognized by Transport Department. Such candidates shall be exempted from written examination but will be required to qualify the oral examination.

**Certificate  
of Service**

4.4.7 A certificate of service granted as per sub-rules 4.4.6 shall have the same effect as a certificate of competency granted under these rules. A certificate of Service so issued shall be issued in Form 25.

4.4.8 The Chief Examiner may if he thinks fit grant a license as per format prescribed in Form 26 authorizing a person to act as master of any inland mechanically propelled vessel having engines of 961 BHP or of such less Brake Horse Power as he may deem fit who is in possession of a second-class master's certificate granted as per these rules and has, by virtue of such certificate, acted as master of an inland mechanically propelled vessels having engine of 226 BHP or more brake horse power for a period of not less than five years.

**License to  
act as  
Master**

4.4.9 Any license granted under sub-rule 4.4.8 above shall remain in force only for such time as the person holding the same is in the possession of Master Class 2 Certificate referred to in sub-rule 4.4.8 above. Provided that the State Government may if it thinks fit, suspend, cancel or vary the conditions of any such licenses.

#### **4.5 Engineering Department:-**

4.5.1 Examination for the grant of certificate of competency as Inland Engineer Certificate, Engine Driver Class 1 Certificate, and Engine Driver Class 2 shall be held by the examiner at the places of examination in the State on such dates as may be published by the examination center.

**Engineering  
Department**

4.5.2 Every application for examination shall be filled and submitted in Form 23 appended to these rules together with copies of documents stated therein. The application so filled shall be received at the examination center before the date fixed for examination together with the supporting documents required for ascertaining eligibility of the candidates.

4.5.3 **Minimum requirements for certification of Engineer of an Inland Mechanically Propelled Vessel:-** Every candidate for certification as Inland Vessel Engineer shall be:-

**Engineer of  
Inland  
Vessel**

- i) In possession of Engine Driver Class 1 Competency Service issued under the Inland Vessels Act, 1917 (Central Act 1 of 1917)
- ii) Should have worked for 18 months on a vessel having engines more than 565 BHP for 36 months on a vessel more than 226 BHP while holding Engine Driver Class 1 certificate issued under the Inland Vessel Act, 1917 (Central Act 1 of 1917)
- iii) Shall produce a medical certificate as to his physical fitness in Form 24.
- iv) Shall have successfully attended approved Preparatory Course for Inland Vessel Engineer. The Preparatory Course for Inland Vessel Engineer is to be approved by Inland Waterway Authority of India or State Government. The minimum course duration, contents and structure of the Preparatory Course for Inland Vessel Engineer shall be same as followed by NINI Patna and amended by it from time to time.
- v) Have completed the five basic courses for inland vessels approved by IWAI or DGS or State Government namely:
  - a) Elementary First Aid (EFA)
  - b) Proficiency in survival techniques (PST)
  - c) Personal safety and social responsibility (PSSR)
  - d) Fire Prevention and Fire Fighting (FPFF)
  - e) Security Training For Seafarers With Designated Security Duties (STSDSD)

**4.5.4 Minimum requirements for certification of Engine Driver Class 1 of an inland mechanically propelled vessel:-** Every candidate for certification as Engine Driver Class 1 shall:-

**Engine  
Driver Class  
- I**

- i) Be in possession of Engine Driver Class 2 Competency Service issued under the Inland Vessels Act, 1917 (Central Act 1 of 1917)
- ii) Have served for a period not less than one year as Assistant to Engine driver on regular watch on the main engines of a motor vessel or not less than 565 break horse power, while holding an Engine Driver Class 2 Certificate for a motor vessel; **or**  
for a period of not less than 24 months as Assistant to Engine Driver / Oil man with a Second Class Engine Driver's Certificate of motor vessel in charge of a watch on the main engine of a motor vessel of not less than 226 brake horse power; **or**  
for a period of not less than three years in the engine room of a motor vessel of not less than 226 brake horse power of which period not less than one year should have been served as an assistant to driver or oilman whilst holding a Second Class Engine Driver's Certificate for motor vessels; **or**  
For a period of not less than 18 months with an Engine Driver Class 2 certificate for motor vessels as driver in-charge of the engine of a motor vessel up to 226 BHP.
- iii) Produce a medical certificate as to his physical fitness in Form 24
- iv) Have successfully attended approved Preparatory Course for Engine Drive Class 1. The Preparatory Course for Engine Driver Class is to be approved by Inland Waterway Authority of India or State Government. The minimum course duration, contents and structure of the Preparatory Course for Engine Driver Class 1 shall be same as followed by NINI Patna and amended by it from time to time.
- v) Have completed the five basic courses for inland vessels approved by IWAI or DGS or State Government namely:-
  - a) Elementary First Aid (EFA)
  - b) Proficiency in survival techniques (PST)
  - c) Personal safety and social responsibility (PSSR)

- d) Fire Prevention and Fire Fighting (FPFF)
- e) Security Training For Seafarers With Designated Security Duties (STSDSD)

4.5.5 **Minimum requirements for certification of Engine Driver Class 2 of an inland mechanically propelled vessel:-** Every candidate for certification as Engine Driver Class 2 shall be:-

**Engine  
Driver Class  
- II**

- i) A Citizen of India.
- ii) Not less than twenty years of age.
- iii) Shall have successfully undergone approved Induction Training for Rating (Engine) / General Purpose Rating. The duration and curriculum of the Induction Training shall be same as adopted by NINI.

Such candidate should have served for a period of not less than four years in the engine room of a motor vessel of not less than 226 brake horse power, of which period not less than one year must have been served as Assistant Driver **or**

Total of four years' service as GP rating or rating (engine) of which at least six months shall be on Inland vessel; **or**

For period of not less than five years in the engine room of motor vessel having engines of not less than 85 break horse power, or six years in the engine – room of a vessel having engines of not less than 40 brake horse power of which period not less than one year should have been as assistant driver or oilman; **or**

Such candidate who has passed Class 10 / Matric Examination from recognized school board must have three years of service at or on Inland Waters, one year of which service must be as an Oilman or as an Assistant Driver and should have performed at least six months service on board the vessel plying in the Port / Inland Rivers of the State/Candidate is appearing for examination of 2<sup>nd</sup> Class Engine Driver.

- iv) Shall produce a medical certificate as to his physical fitness in Form 24.
- v) Shall have successfully attended approved Preparatory Course for Engine Driver Class 2. The Preparatory Course for Engine Driver Class 2 is to be approved by Inland Waterway Authority of India or State Government. The minimum course duration, contents and structure of the Preparatory Course for Engine Driver Class 2 shall be same as followed by National Inland Navigation Institute Patna and amended by it from time to time.
- vi) Have completed the five basic courses for inland vessels approved by Inland Waterway Authority of India or Director General of Shipping or State Government namely:-
  - a) Elementary First Air (EFA)
  - b) Proficiency in survival techniques (PST)
  - c) Personal safety and social responsibility (PSSR)
  - d) Fire Prevention and Fire Fighting (FPFF)
  - e) Security Training For Seafarers With Designated Security Duties (STSDSD)

4.5.6 A candidate who has served as an engineer of a vessel of the Coast Guard, Indian Navy or regular Army for a period of 5 years may be granted a Certificate of Service as Engine Drivers and Engineers or Inland Vessels, depending on the size of vessel served and on successful completion of relevant preparatory course including the four basic safety courses from National Inland Navigation Institute (NINI), Patna or from any other institute recognized by State Government.

**Certificate  
of Service**

4.5.7 A certificate of service granted as per sub-rule 4.5.6 shall have the same effect as a certificate of competency granted under these rules. A certificate of Service so issued shall be issued in Form 25.

4.5.8 The Chief Examiner may if he thinks fit grant a license as per format prescribed in Form 26 authorizing a person to act as engineer of any inland mechanically propelled vessels having engines of 960 BHP or of such less nominal horse power as he may deem fit who is in possession

**License to  
act as  
Engineer**



of an Engine Driver Class 1 Certificate granted under the Merchant Shipping Act, 1958, and has, by virtue of such certificate, served as an engine driver of an inland mechanically propelled vessels having engines of not less than 395 BHP seventy nominal horse-power for five years, for not less than two and a half years of which period he has been the engine-driver of such vessel.

- 4.5.9 Any license granted under sub-rule 4.5.8 above shall remain in force only for such time as the person holding the same is in the possession of Engine Driver Class 1 Certificate referred to in sub-rule 4.5.8 above. Provided that the State Government may if it thinks fit, suspend, cancel or vary the conditions of any such licenses.

**4.5 (a) General Purpose Rating:-**

**Minimum requirements to join as General Purpose Rating of an inland mechanically propelled vessel:-** Every candidate for certification as General Purpose Rating shall be:-

- i) A citizen of India
- ii) Not less than 18 years of age.
- iii) Passed minimum 8<sup>th</sup> class for existing Deck / Engine Hands of Inland Vessel and passed minimum 10<sup>th</sup> for new entrants.
- iv) Produce a medical certificate as to his physical fitness in Form 24.
- v) If new entrant – completed approved induction training for General Purpose Ratings at National Inland Navigation Institute (NINI), Patna or similar training establishment approved by the State.
- vi) Existing Deck / Engine Hand – completed minimum 2 years as assistant Deck / Engine Hand on an Inland Vessel and have obtained a Certificate of Proficiency from a Master Class 1/2/3 for Deck Hand or from Engineer / Engine Driver Class 1/2 for Engine Hand under whom he has completed last six months of training as assistant deck / engine hand. Such existing Deck / Engine Hands will be required to undergo an approved conversion course to General Purpose Rating. The Conversion Course for General Purpose Rating is to be approved by Inland Waterways Authority of India or State Government. The

**General  
Purpose  
Rating**

minimum course duration, contents and structure of the Conversion Course to General Rating Course shall be same as followed by the National Inland Navigation Institute, Patna and amended by it from time to time.

- vii) Have completed the five basic courses for inland vessels approved by Inland Waterways Authority of India or Directorate General of Shipping or State Government namely:-
- a) Elementary First Air (EFA)
  - b) Proficiency in survival techniques (PST)
  - c) Personal safety and social responsibility (PSSR)
  - d) Fire Prevention and Fire Fighting (FPFF)
  - e) Security Training For Seafarers With Designated Security Duties (STSDSD)

#### **4.6 Certificate to be made in duplicate:-**

Every certificate of competency or service and every license granted under these rules and / or the Act shall be made in duplicate, and one copy shall be delivered to the person entitled to the certificate, or license and the other shall be kept and recorded with the issuing authority with one set of such record forwarded to Chief Examiner on quarterly basis.

**Certificate  
to be made  
in Duplicate**

#### **4.7 Copy of certificate or licenses to be granted in certain cases:-**

Whenever a master or serang, or an engineer or engine-driver, proves, to the satisfaction of the authority which granted his certificate, or license that he has, without fault on his part, lost or been deprived of it, a copy of the certificate or license to which according to the record kept under rules 4.6, he appears to be entitled shall be granted to him and shall have the same effect as the original.

**Copy of  
Certificates  
& Licenses**

#### **4.8 Area in which certificates of competency or service and licenses shall have effect:-**

- 4.8.1 A certificate of competency or service and license granted under this chapter shall have effect throughout India. Provided further that such certificate or license may be endorsed by the State Government of any other State, or with the general or special sanction of the State Government of such other State, by the authority granting it so as to

**Applicability  
of  
Certificates  
of  
Competency  
or Service  
and Licenses**

have effect in such other State or any part thereof and thereupon shall have effect accordingly.

4.8.2 Provided that the authority granting such certificate or license may, by endorsement thereon, restrict the effect of such certificate or license to any part of such State.

4.8.3 A certificate of competency or service and license granted by Government of any other Indian State under the Inland Vessel Act 1917 shall have same effect and applicability in the Inland Vessels and Inland Waterways of this State subject to compliance of following additional conditions:-

- i) Master and Deck Department: - The certificate holder serves for a minimum period of 6 months on an inland vessel plying in the State under the charge of a Master duly qualified to command an inland vessel plying within the State.
- ii) Engineering Department: - No additional requirements.

#### **4.9 Validity of Certificates of Competency and Licenses:-**

The validity of all competency certificates issued for the first time to the candidates who pass the Masters, serang, Engineers, Engine Drivers or General Purpose Rating's examination shall be for period of five years.

**Validity of  
Certificates  
of  
Competency**

#### **4.10 Revalidation of Certificates of Competency**

4.10.1 In case the holder of Certificate of Competency has served in Inland Vessel for minimum period of 1 year during the last 5 years, he shall apply for renewal to the Examiner at any examination center in Form 27 together with supporting documents and appropriate fees. On processing of his documents the Certificates shall be revalidated for next 5 years till the applicant attains an age of 60 years. After 60 years the certificates shall be revalidated for a period of 2 years at a time up to 65 years of age subject to medical fitness and / or as regulated by the issuing authority.

**Revalidation  
of  
Certificates  
of  
Competency**

4.10.2 In case the holder of Certificate of Competency does not fulfill the requirement of service on Inland Vessels prescribed in sub rule 4.10.1 above, but has served in Inland Vessel for a minimum period of 1 year in last 10 years, he shall be required to undergo the Preparatory Course

for grant of that grade of Certificate of Competency at National Inland Navigation Institute or Institute approved by State Government. On successful completion of the course, he shall apply for renewal to the examiner at any examination center in Form 27 together with supporting documents and appropriate fees. On processing of his documents the Certificate shall be revalidated for next 5 years.

4.10.3 In case a holder of Certificate of Competency does not fulfill the requirements of sub rules 4.10.1 or 4.10.2 his lapsed Certificate of Competency may be revalidated on successful completion of Preparatory Course for applicable grade and accruing 3 months service on inland vessel in lower grade

#### **4.11 Cancellation of Certificate of Competency / License:-**

4.11.1 Any certificate or license granted or any endorsement made therein under this chapter may be suspended or cancelled by the State in any of the following cases:-

- i) If, on any investigation made under the IV Act, the Court reports that the wreck or abandonment of or loss or damage to, any vessel, or loss of life has been caused by the wrongful act or default of the holder of such certificate.
- ii) That the holder of such certificate is incompetent,
- iii) Has been guilty of any gross act of drunkenness, tyranny or other misconduct,
- iv) If the holder of such certificate is proved to have been convicted of any non-bailable offence, or
- v) if the holder of such certificate is proved to have deserted his vessel or has absented himself, without leave and without sufficient reason, from his vessel or from his duty; or
- vi) if, in the case of a person holding a certificate of competency or service as second-class master or serang, or as engine-driver, such person is or has become, in the opinion of the State Government, unfit to act as a second-class master or serang or an engine-driver, as the case may be;

4.11.2 Every person whose certificate is suspended or cancelled under this Chapter shall deliver it up to the Chief Examiner.

4.11.3 State Government or Chief Examiner may revoke any order of

suspension or cancellation which it may have made under this Chapter to grant new certificate, or grant, without examination to any person whose certificate it has so cancelled a new certificate. A certificate so granted shall have the same effect as a certificate of competency granted under this Act after examination.

## **CHAPTER – V**

### **INVESTIGATIONS INTO CASUALITIES**

#### **5.1 Report of Causalities to be made to nearest Police Station:-**

Wherever:-

- a) Any inland mechanically propelled vessel has been wrecked, abandoned or materially damaged, or
- b) by reason of any causality happening to, or onboard of, any inland mechanically propelled vessel loss of life has ensued, or
- c) any inland mechanically propelled vessel, has caused loss of material damage to, any other vessel,

**Report of  
Causalities**

The master of the mechanically propelled vessel shall forthwith give notice of the wreck, abandonment, damage, causality, or loss to the officer in-charge of the nearest police-station. The officer in-charge of the police station receiving the information shall besides taking steps as warranted by the circumstances shall also forthwith inform the Administration.

The owner / master of the inland vessel shall also notify and report the occurrence to the Registration Authority and the Chief Surveyor / Maritime Directorate / Board / Commission of the State.

#### **5.2 Appointment of Court of investigation:-**

- 5.2.1 Preliminary inquiry:- On receiving information about the inland vessel casualty, the Administration shall appoint an appropriate officer with the knowledge of Inland Vessel operations and navigation to conduct a Preliminary inquiry into the accident. The purpose of the preliminary inquiry is to establish the following:-

**Appointment  
of Court of  
Investigation**

- a) The reported incident qualifies to be an inland vessel casualty within the meaning of the Act.
- b) The details of the voyage leading to the casualty
- c) The events that lead to the casualty
- d) The extent to which loss of life or loss of property or damage to environment has occurred due to the shipping casualty.

- e) The causes that led to the casualty including acts of in competency, negligence or misconduct of the person / persons concerned.
- 5.2.2 The preliminary inquiry which is held under sub rule 5.2.1 above is a departmental inquiry and the proceedings of such enquiries are not released to the public.
- 5.2.3 In conducting the preliminary inquiry, the inquiry officer has the following responsibilities:-
- a) To inform the State Government of the details of the shipping causalities occurring within their jurisdiction.
  - b) To go on board the inland vessel and inspect the same including machinery and equipment but not unnecessarily detaining or delaying her from proceeding on any voyage.
  - c) To enter and inspect any premises to facilities the completion of the preliminary inquiry.
  - d) To summon persons he thinks fit to take statement to complete the preliminary inquiry.
  - e) To demand the production of all log books, documents or papers he considers necessary for the inquiry.
  - f) To submit a report to the State Government.
- 5.2.4. Whenever on the basis of the preliminary inquiry, the State Government is satisfied that it is necessary or expedient to have a formal investigation into the facts of any case reported under rule 5.1 of this chapter or otherwise brought to its notice, the State Government may:-
- a) Appoint a special Court and direct the Court to make the investigation at such place as the State Government may fix in this behalf, or
  - b) Direct any principal Court of ordinary criminal jurisdiction or the Court of any District Magistrate to make the investigation.
- 5.2.5 A special Court appointed under clause (a) of sub-rule 5.2.4 shall consist of not less than two and more than four persons of whom one shall be a Magistrate, one shall be a person conversant with maritime affairs or with the navigation of inland mechanically propelled vessels, and the other or others (if any) shall be conversant with either maritime

or mercantile affaires, or with the navigation of inland mechanically propelled vessels.

**5.3 Powers of Court of investigation to inquire into charges of incompetency or misconduct:-**

**Powers of  
Court of  
Investigation**

5.3.1 Any Court making an investigation under rule 5.2 of these rules may inquire into any charge of incompetency or misconduct arising in the course of the investigation against any master, engineer or engine-driver, or any person holding a certificate granted under Chapter III of the Act, as well as into any charge of a wrongful act or default on his part causing any wreck, abandonment, damage, casualty, or loss referred to in rule 5.1 of these rules.

5.3.2 In every case in which any such charge arises against any master, engineer or engine-driver, or any person holding a certificate granted under Chapter III of the Act in the course of any investigation, the Court shall, before the commencement of the inquiry into the charge, cause to be furnished to him a copy of the report or of any statement of the case upon which the investigation has been directed.

**5.4 Powers for State Government to direct investigation to otherwise than of under rule 5.1:-**

**Powers of  
State  
Government  
to Direct  
Investigation**

5.4.1 If the State Government has reasons to believe that there are grounds charging any master, engineer or engine-driver, or any person holding certificate granted under Chapter III of the Act, with incompetency misconduct, otherwise than in the course of an investigation under section of these rules, it may send a statement of the case to the principal Court ordinary criminal jurisdiction, or the Court of the District Magistrate, nearest to the place at which it may be convenient for the parties and to attend, and may direct the court to make an investigation into the charge.

5.4.2 Before commencing an investigation under sub-rule 5.4.1 above, the Court shall cause the person charged to be furnished with a copy of the case sent by the State Government.



**5.5 Person charged to be heard:-**

For the purpose of an investigation under this Chapter into any charges against a master, engineer or engine-driver, or any person holding a certificate granted under Chapter III of the Act, the Court may summon him to appear, and shall give him full opportunity of making a defense, either in the personal or otherwise.

**Persons  
charged to  
be heard**

**5.6 Assessors:-**

5.6.1 When, in the opinion of the Court making an investigation under this Chapter, the investigation involves, or appears likely to involve, any Question as to the cancelling or suspension of the certificate of or engine-driver, or any person holding a certificate granted under Chapter III of the Act, the Court shall appoint as its assessors, for the purposes of the investigation, two persons having experience in the merchant services or in the navigation of inland mechanically propelled vessel.

**Assessors**

5.6.2 In every other investigation the Court may, if it thinks fit, appoint as its assessor, for the purposes of the investigation, any person conversant maritime affairs or the navigation of inland mechanically propelled vessel willing to act as assessor.

5.6.3 Every person appointed as an assess or under this section shall attend the investigation and deliver his opinion in writing to be recorded on proceedings.

**5.7 Powers of Court as to evidence and Rules of proceedings:-**

5.7.1 For the purpose of any investigation under this Chapter, the court making the investigation shall, so far as relates to compelling the attendance and examination of witnesses, and the production of documents and the Rules of the proceedings, have:-

**Powers of  
Court as to  
Evidence  
Regulation**

a) If the court is a special Court – the same powers as are exercisable by the principal Court of ordinary criminal jurisdiction for the place at which the investigation is made; or

- b) If the Court is a principal court of ordinary criminal jurisdiction or the Court of the District Magistrate – the same powers as are exercisable respectively by either Court in the exercise of its criminal jurisdiction.

**5.8 Powers of Court to effect arrest of witnesses by entry and detention of vessels :-**

**Powers of  
Court to  
Arrest**

- 5.8.1 If any court making an investigation under this Chapter issues a warrant of arrest to compel the attendance of any person whose evidence is in its opinion necessary, it may, for the purpose of effecting the arrest, but subject to any general or specific instructions issued by the State Government in this behalf authorize any officer to enter any vessel.
- 5.8.2 An officer so authorized to enter any vessel; may, for the purpose of enforcing the entry, call to his aid any officers of Police or Customs, or any other persons, and may seize and detain the vessel for such time as is reasonably necessary to effect the arrest; and every such officer or other person shall be deemed to be a public servant within the meaning of the Indian Penal Code.
- 5.8.3 No person shall be detained under this section for more than forty-eight hours.

**5.9 Power of Court to commit for trial and to bind over witnesses:-**

**Powers of  
Court to  
Commit  
Trial**

Whenever, in the course of an investigation under this Chapter, it appears to the Court making the investigation may that any person has committed, within the territories to which the Act extends, an offence punishable under any law in force in such territories, the Court making the investigation (subject to such rules consistent with the Act as the High Court may, from time to time, make in this behalf):-

- a) Cause such person to be arrested:
- b) Commit him or hold him to bail to take his trial before the proper Court;
- c) Bind over any other person to give evidence at such trial; and
- d) Exercise, for the purposes of this section, all the powers of a Magistrate of the first-class or of a Presidency Magistrate.

**5.10 Deposition of absent witnesses:-****Deposition  
of Absent  
Witnesses**

5.10.1 Whenever, in the course of a trial referred to in rule 5.9, the evidence of any witness is required in relation to the subject matter, any deposition previously made by him in relation to the same subject-matter before any Court making an investigation under this Chapter shall, if authenticated by the signature of the Magistrate or presiding Judge or such Court, be admissible in evidence on proof:-

- a) That the witness cannot be found within the jurisdiction of the Court before which the trial is held; and
- b) That the deposition was made in the presence of the person accused, and that he had an opportunity of cross-examining the witness.

5.10.2 A certificate signed by such Magistrate or presiding Judge that the deposition was made in the presence of the accused, and that he had an opportunity of cross-examining the witness shall, unless the contrary be proved, be sufficient evidence that it was so made and that the accused had such opportunity.

**5.11 Report by Court to State Government:-****Report by  
Court to  
State  
Government**

The Court shall, in the case of every investigation under this Chapter, transmit to the State Government a full report of the conclusions at which it has arrived, together with the evidence recorded and the written opinion of any assessor.

**5.12 Court to exercise its power independently of the assessor:-****Court to  
Exercise  
Power  
Independent  
of Assessor**

Notwithstanding the appointment under rule 5.6 of an assessor or assessors by a Court making an investigation under this Chapter, the exercise of all powers conferred on such Court by this chapter and the Act shall rest with the Court along.

**5.13 Powers for State Government to direct investigations into causes of explosions on mechanically propelled vessels:-****Investigation  
into Causes  
of Explosion**

5.13.1 Whenever any explosion occurs on board any inland mechanically propelled vessel, the State Government may direct that an investigation into the cause of the explosion be made by such person or persons as it may appoint in this behalf.

5.13.2 The person or persons so appointed may, for the purpose of the investigation, enter into and upon the mechanically propelled vessel,

with all necessary workmen and laborers, and remove any portion of the mechanically propelled vessel or of the machinery thereof, and shall report to the State Government what, in his or their opinion, was the cause of the explosion.

- 5.13.3 Every person making an investigation under this section shall be deemed to be a public servant within the meaning of the Indian Penal Code.

**CHAPTER - VI**  
**PROTECTION OF, AND CARRIAGE OF PASSENGERS IN INLAND**  
**MECHANICALLY PROPELLED VESSELS**

**PART – A**  
**CARRIAGE OF PASSENGERS IN INLAND MECHANICALLY**  
**PROPELLED VESSELS**

**Part – A**  
**Carriage of**  
**Passengers**

**6A.1 Right of Refusal to carry certain passengers:-**

**Right of**  
**Refusal to**  
**certain**  
**passengers**

- 6A.1.1 The master or any employee authorized in this behalf by the owner or master of any inland vessel, may refuse to admit any person on the Inland Vessel as a passenger,
- a) If he has not paid his fare; or
  - b) If he is insane; or
  - c) If he is suffering from an infectious or contagious disease; or
  - d) If he is drunk and incapable of taking care of himself; or
  - e) If he is disorderly, or if he is otherwise in such a state or is conducting himself in such a manner, as to cause or likely to cause annoyance to other passengers; or
  - f) when the Inland vessel, or the part thereof to which such persons seeks admission, already contains the maximum number of passengers which may lawfully be carried therein.
- 6A.1.2 The Master of the inland vessel performing voyages / trips for carriage of passengers shall maintain a record of such cases in which right of refusal under section 6A. 1. 1 is exercised by the master of an inland vessel.

**6A. 2 Duties of the Passengers:-**

6A.2.1 No passenger shall:-

- a) Travel, or attempt to travel in an inland vessel without having previously paid his fare; or
- b) Travel, or attempt to travel in accommodation of a higher class than that for which his fare has been paid.

**Duties of**  
**Passengers**

- c) Travel beyond the place to which his fare has been paid without previously paying the additional fare in respect of the additional distance; or
- d) Use, or attempt to use ticket on any day for which such ticket is not available; or
- e) Take, or attempt to take luggage with him without having previously paid the freight, if any; payable in respect thereof.

6A.2.2. Every passenger of an inland vessel shall, when required by the master or any person authorized in this behalf by the master or owner:-

- i. Pay his fare, if not already paid,
- ii. Present his ticket for examination.
- iii. Deliver such ticket at or near the end of the journey.

6A.2.3 No passenger shall alter or deface his ticket so as to render illegible the date or number or any other material portion thereof.

6A.2.4 No passenger shall take with him or keep on board an inland vessel;

- a) Any decayed meat, fish or vegetable, or any such other offensive article.
- b) Any dangerous and explosive material.
- c) Any firearms.

6A.2.5 No passenger on an inland vessel shall:-

- a) Obstruct or impede the master or any other officer of the Inland vessel in the discharge of his duties;
- b) in any way obstruct or interfere with the loading or unloading of luggage or cargo; obstruct passages / alleyways by goods / baggage / belongings
- c) Damage, or attempt to damage the Inland vessel or any article on board thereof;
- d) Enter or leave to attempt to enter or leave, any inland vessel when such Inland vessel is in motion;
- e) Without lawful reason, enter a compartment or place reserved for the use of another passenger or refuse to leave it when required to do so by the master or any other officer of the Inland vessel;

- f) Smoke or be in possession of a fire or light, in any part of the Inland vessel where smoking or the possession of a fire or light is not permitted by the master thereof;
- g) Be drunk and disorderly, or drunk and incapable of taking care of himself;
- h) Commit any nuisance or act of indecency or use obscene or abusive language;
- i) Without lawful excuse, molest or interfere with the comfort of any other passenger.

6.A.2.6 No male passenger on an inland vessel, knowing that a compartment or place has been reserved for the exclusive use of females, shall enter such compartment or place without lawful reasons, or having entered it, shall remain therein after being required by the master, or any other officer of the Inland vessel to leave it.

### **6A.3 Master's Authority to Evict Passengers:**

6A.3.1 The master or owner or any employee authorized in this behalf by the owner or master, of any inland vessel may make the following passengers leave the Inland vessel, namely:-

**Master's  
Authority to  
Evict  
Passengers**

- a) Insane passengers, and their attendants (if any), if they have embarked without the specific permission of the master, or of the authorized employee;
- b) Passengers suffering from an infectious or contagious disease, when they have embarked without the specific permission of the master or owner or of the authorized employee;
- c) Passengers who are drunk and incapable of taking care of themselves;
- d) Passengers who are disorderly, or are otherwise in such a state, or are conducting themselves in such a manner, as to cause or likely to cause annoyance to other passengers;
- e) Passengers carrying fire arms or any weapon without the special permission of the master or of the authorized employee.
- f) Any passengers who have embarked in excess of the maximum number of passengers which may lawfully be carried in the Inland vessel or in the part of the inland vessel thereof in which they propose to travel; and

g) Passengers who have not paid their fare.

6A.3.2 A person who has been refused permission to an inland vessel under rule 6A.1 shall not embark thereon; and a person who is required under Sub-rule 6A.3.1 to leave an inland vessel shall leave at such convenient time and place as the master / owner or authorized employee may direct.

6A.3.3 Provided that any person who is refused admission under rule (f) of sub rule 6.3.1 to leave shall be entitled to have his fare returned to him.

#### **6A.4 Rights of the Passengers:-**

Master / Owner / Manager of the passenger vessels shall take appropriate steps to ensure that rights of the passengers including but not limited to the following are assured:-

#### **Rights of the Passengers**

##### **1. The Right to Safety and Security:-**

- a) Good, safe and certified inland vessels shall be deployed for passenger carriage.
- b) Over all hygiene of inland vessels, toilets, hotels, shops etc.
- c) Protection from Crew-made casualties like unsafe working practices in handling / managing of passengers and operation of vessels.
- d) Security of life and assets.

##### **2. The Right against cancellations or delays due to man-made causes:-**

- a) Controlling actions which block the passenger movements such as Bandh, harthals, strikes, procession etc.
- b) Protection from cancellation of journey (full/part) for the benefit of service provider.
- c) Controlling Overall man-made delays
- d) Optimized journey time

##### **3. The Right for courteous service and comfort:-**

- a) Crew behavior and supportive staff behavior.
- b) Comfort on vessel and in waiting area at jetty.



- c) Ease of boarding and alighting.

**4. The Right to be informed:-**

- a) Proper information on arrival time, departure time, running time, fare etc.
- b) Route and stops / halts information on the inland vessel.
- c) Facts to make an informed choice like insurance / compensation against injury / loss of life.
- d) Protection against misleading information.

**5. The Right to be heard:-**

- a) Considering passenger views in policy making.
- b) Development of passenger service industry based on passenger needs and wants.

**6. The Right to redress.**

- a) Fair settlement of complaints.
- b) Setting up of Grievance Redressal Mechanism and control room.

**6A.5 Case of Epidemic Disease on board:-**

6A.5.1 Whenever any case of plague, cholera or other dangerous epidemic disease occurs on board an Inland Vessel, the Master or Person in-charge, shall immediately:-

**Epidemic  
Disease On  
board**

- a) Remove the patient, together with his bedding, drinking utensils and food, to a part of the deck at the extreme stern of the Inland Vessel or to a suitable place / cabin allocated for isolation of such patients. In the case of plague, the clothing, bedding, and if considered necessary the baggage of the patient shall be disinfected immediately;
- b) cause all excreta, vomit and urine which may have been discharged on to the dock / vessel by the patient, to be cleaned away with a solution of cyllin and
- c) Report the case to the Sub-divisional of District Magistrate within whose jurisdiction the nearest facility of berthing / mooring lines, and also to the Chief Medical Officer of the district.
- d) Where such place of berthing / mooring is not at the headquarters of a sub-division or district, the report mentioned in sub-clause (c) of this

Sub-section shall be sent by the Master or Officer-in-charge, as the case may be, by the most expeditious means available, to the next headquarters of a sub-division or district which the Inland vessel will touch.

6A.5.2 If, when the case occurs, the Inland Vessel is lying at berth / mooring at the headquarters of a sub-division or district, or otherwise, when the Inland Vessel has reached the nearest berth / mooring facility which is at such headquarters, the Master or Officer in-charge shall not move the Inland Vessel there from until permission has been given by the District Magistrate or Sub-divisional Magistrate as the case may be.

6A.5.3 On receipt of the report mentioned in sub-rule 6A.5.1 the Magistrate shall at once depute a Medical Officer to inspect and disinfect the Inland Vessel.

6A.5.4 Such Medical Officer shall visit the Inland Vessel and if a suitable hospital is available, or if other satisfactory arrangements can be made for the patients' treatment and segregation, shall bring the patient to land.

6A.5.5 Where no such hospital is available, and no such arrangement can be made, the patient shall not be allowed to land, but the Medical Officer deputed under sub-rule 6A.5.3 shall take steps to ensure the proper segregation of the patient on the Inland Vessel, and to satisfy himself that every possible precaution has been taken to prevent the spread of the disease.

6A.5.6 The Medical Officer deputed under sub-rule 6A.5.3 shall, in all cases, cause the deck, cabins, latrines and any other part of the Inland Vessel, while the patient has been, to be thoroughly disinfected.

6A.5.7 In case of death of a passenger, the body of the patient shall be wrapped in cloth soaked in a strong solution of cyllin or suitable disinfectant, and handed over to his relatives, friends, or where he is without relatives / friends, to the police, who shall arrange for its disposal.

6A.5.8 If not already disinfected in accordance with the provisions of clause 6A.5.3 the clothes of the deceased (except those in the bedding and all food in his possession shall be burnt, unless the contrary are passed by the Medical Officer.

6A.5.9 When the orders contained in these rules have been complied with, and The Medical Officer deputed under sub-rule 6A.5.3 is satisfied that there is no reason further to detain the inland vessel, he may give permission to the vessel to proceed on the journey.

6A.5.10 The owner of every inland vessel shall be bound to keep on board each inland vessel, five liters of cyllin or suitable disinfectant.

6A.5.11 The patient may be permitted to land on the expiry of a period to be fixed by the Medical Officer deputed under sub-rule 6A.5.3

#### **6A.6 Cargo Loading in Passenger cum cargo vessels:-**

6A.6.1 A passenger cum cargo inland vessel carrying both passengers and cargo, all cargo carried on deck shall be efficiently stowed to prevent it from shifting.

6A.6.2 A space of at least 75 centimeters wide on each side of the cargo, and within the bulwarks, shall be kept clear as fore and aft passage way.

**Cargo  
Loading in  
Passenger  
cum Cargo  
Vessels**

#### **6A.7 Power to Arrest:-**

6A.7.1 The master or any other officer of an inland mechanically propelled vessels, and any person called by him to his assistance, may arrest any person who has committed a breach of any rule made under this section, even if the name and address of such person are unknown to the master or such other officer.

6A.7.2 The procedure prescribed by section 43 of the Code of Criminal Procedure, 1973 in the case of arrest by private persons shall apply to every arrest made under this section.

**Powers to  
Arrest**

#### **6A.8 Passenger Accommodation:-**

6A.8.1 Area of each part of passenger space and the length of seats therein shall be measured and the lesser of the numbers given by area and by seating shall be the allowable number during fair season provided that in open vessels the allowable number of passengers is not to exceed two per 0.3 meter of length of the vessel and in no case to exceed 100.

**Passenger  
Accomm-  
odation**

6A.8.2 Total number of passengers permitted to be carried during the foul season shall not exceed two third the total number allowed for fair season provided that vessels operating in sheltered waters such as creeks may be permitted to carry same number of passengers throughout the year.

6A.8.3 In passenger ferries plying by day and night, number of passengers permitted by night shall be three fourth of that by day.

6A.8.4 Passenger ferries plying with seating and standing passengers on single deck vessels on short cross / along sheltered water voyage by day and by night up to 2200 hours shall have the number of standing passengers calculated at not less than 0.21 sq. m per person after deducting the deck area required for the number of seating passengers and area for ventilators, skylights, windlass, safety appliances and vessel utility area etc.

6A.8.5 Open Launches:-

- a) The forward extremity of the space available for the passenger accommodation is to be determined by the Surveyor, with due regard to the proper stowage of the anchor and cable and to any other necessary equipment in the bow of the vessel, and the length shall be measured from this point to the foreside of the bulkhead separating the machinery space from the passenger space.
- b) If the machinery is placed amidships, and additional space is available for passengers between the after bulkhead of the machinery space and a position near the stern of the vessels, to be determined by the Surveyor as suitable having due regard to the steering arrangements and fuel tank space. The breadths are to be measured at suitable intervals to the back of the side benches or to the inside of gunwale or to the inside of the half deck (where fitted) whichever measurement is least.
- c) The space abreast of the machinery space may be included in the passenger measurements if the engine is enclosed by a casting of longitudinal bulkheads and if the distance between the sides of the casting or bulkheads and the back seats is at least 0.9m.

- d) The number of passenger allowable by area shall be found by dividing by 0.36 the area in square meters of the clear space measured as above. Allowance shall be made for the crew and baggage in the area measurements (15%). The number allowable by seating shall be found by dividing the length in meter of each continuous fixed seat by 0.45.
- e) Seating on buoyant apparatus shall be computed separately.

**6A.8.6 Decked Launches:-**

- a) The forward extremity of the space available of the space for the passenger accommodation shall be determined as above for open launches, and the clear area of this space is to be obtained by deducting all encumbrances such as skylights, companions, machinery casings, navigating spaces, life boats and ventilator.
- b) The maximum number of passengers that may be allowed shall be ascertained by using the divisor 0.56 for the area of deck in square meter of the saloon or cabin floor below deck. Only one saloon below deck shall be included in passenger measurement, except that where the vessel has an appropriate standard.

**6A.8.7** In all vessels the seating must be so arranged that there will be no serious obstacle to prevent a person from passing forward and aft quickly in case of emergency.

**6A.8.8** No space within 0.5 m of entrance to any ladder way, wash place or lavatory shall be included in the space measured for passengers.

**6A.8.9** Vessels engaged in carrying large number of passengers shall have a strong barrier constructed on each deck.

**6A.9** Notwithstanding anything contained in these rules, the Government, by a general or a specific order, may direct the vessel owners, vessel builders or persons / passengers involved in any manner with vessel operation to add / delete / amend certain technical specifications of vessels or of its operational aspects in order to enhance safety of vessels, monitoring of movement, passengers comfort and general rules of the Inland Transport Sector.

**PART – B****FIRE APPLIANCES TO BE CARRIED IN INLAND  
MECHANICALLY PROPELLED VESSELS****Part – B  
Fire  
Appliances****6B.1 Application:-**

This rule shall apply to all vessels excepting the following for the reasons stated against each:-

**Applications**

- a) Vessels above 500 tons gross. These vessels shall be required to comply with requirements of Merchant Shipping (Fire Appliances) rule 1969 as applicable to ships on coastal voyages.
- b) Hovercrafts: - Requirements in respect of hovercrafts shall be specially considered by the competent officer.
- c) Provided that these rules do not apply to the existing vessels for a period of 6 months from the date of publication of these rules or till their next annual survey whichever is early.

**6B.2 Fire Control and Fire Fighting Appliances Plan:-**

All inland vessels shall carry on board a copy of approved plan showing the detailed location of all the Fire Control and Fire Fighting Appliances fitted / carried on board.

**Fire Control  
&  
Appliances  
Plan****6B.3 Safety Equipment Plan:-**

In lieu of separate plans described in 6B.2 and 6C.2, an inland vessel may carry a combined Fire Fighting and Life Saving Appliances plan called as Safety Equipment Plan.

**Fire Safety  
Plan****6B.4 Fire Fighting Appliances to be carried on-board:-**

All inland vessels shall be fitted with the following type of firefighting appliances:-

**Fire  
Fighting  
Appliances**

- a) Power Driven Fire Pump:- In every decked vessel and above 150 tons gross in other vessels at least one.
- b) Hand Operated Fire Pump:- In every vessel exceeding 21 meters in length at least one.

- c) Water services pipes, Hydrants, Fire Houses: - In every vessel required to carry a fire pump with water services pipe hydrants and fire hoses so arranged that at-least one powerful jet of water may be directed to any part of the vessel. Hoses shall not be less than 32 mm in dia.
- d) Nozzles: - One jet cum spray nozzle for every fire hose carried in accordance with these rules.
- e) Fire Axe: - At least one in every vessel exceeding 15 meters in length.
- f) Fire Buckets; - At least one for each number of the crew with the minimum of two. Fifty percent of those buckets are to be fitted with lanyards. No vessels need carry more than 20 buckets.
- g) Sand Box with Scoop: - In every vessel one in machinery and boiler spaces. Quantity of sand shall not be less than 0.075 cubic meters.
- h) Non Portable Foam Type Fire Extinguishers: - In case of motor vessels exceeding 30 meter length at least one. Capacity of such extinguishers shall not be less than 45 liters.
- i) Portable fire extinguishers shall be provided on board vessels as follows:-

| <b><u>Lengths</u></b>   | <b><u>Extinguishers Type</u></b>             |
|-------------------------|--|
| Less than 10 m          | 1x4 liter chemical foam                      |
| 10 m to less than 12.5m | 1x4 liter chemical foam<br>2x5 kg dry powder |
| 12.5m to less than 15 m | 2x9 liter chemical foam<br>2x5 kg dry powder |
| 15 m and above          | 2x9 liter chemical foam<br>3x5 kg dry powder |

***Passenger vessels and cargo-passenger vessels 12.5 m and above in length shall carry twice the number of extinguishers required by above table for vessels of their length.***

- j) Smothering Arrangement: - All fixed installation in vessels of over 24 m length having areas containing fuel oil installations shall be covered by smothering arrangement so fixed CO2 type or fixed water sprinkler type. The capacity of the smothering system shall be adequate and to the satisfaction of the competent authority.

**6B.5 Fire Fighting Drills:-**

6B .5.1 The master of every inland vessel shall ensure that mock fire drills are carried out at-least once every month in as realistic manner as practicable.

**Fire  
Fighting  
Drills**

6B.5.2 A record of drills carried out as per 6B.5.1 above shall be recorded in the official log book.

**6B.6 Arrangements for Emergency Escape:-**

Minimum two widely separated escape openings / ladders / stairs need to be provided for totally enclosed accommodations and under deck crew accommodations (if any) and under deck spaces including machinery space for human occupancy.

**Emergency  
Escape**

**6B.7 Penalty:-**

Any breach of provisions in these rules shall be punishable with Imprisonment for a term which may extend to 6 months or fine which may extend to 500 rupees or both.

**Penalty**



**PART – C****LIFE SAVING APPLIANCES TO BE CARRIED IN INLAND  
MECHANICALLY PROPELLED VESSELS****Part – C  
Life Saving  
Appliances****6C.1 Classification of vessels:-**

For the purposes of this part the inland vessels shall be classified as namely:-

**Classification  
of vessels for  
LSA**

- a) Class I – Passenger vessels and Ferry launches boats.
- b) Class II – Cargo vessels and vessels other than those falling under Class I, Class III, and IV.
- c) Class III – Non-propelled vessels (Barges)
- d) Class IV – Pleasure crafts adventure vessels

**6C.2 Life Saving Appliances Plan:-**

All inland vessels shall carry on board a copy of approved plan showing the detailed location of all the Life Saving Appliances fitted / carried onboard.

**Life Saving  
Appliances  
Plan**

**6C.2 (a) Safety Equipment Plan:-**

In lieu of separate plans described in 6B.2 and 6C.2, an inland vessel may carry an approved combined Fire Fighting and Life Saving Appliances plan called as Safety Equipment Plan.

**Safety  
Equipment  
Plan**

**6C.3 Life Saving Appliances to be carried on-board:-**

6C.3.1 An inland vessel of class I shall carry:-

**Life Saving  
Appliances**

- a) Sufficient number of life rafts or buoyant apparatus to accommodate at least 100% number of passengers and crew on board.
- b) One life jackets each for 100% of the passengers and crew onboard.
- c) Life jacket for child, for 10% of total number of persons certified to carry. For the purpose of this section, child means person below 30 kgs.
- d) At least four lifebuoys for vessels up to 25 meter length, six life buoys for vessels 25-45 meter length and 8 life buoys more than 45 meter length. At least two of the life buoys shall be with self-igniting light and buoyant line of 30 m in length.

- e) Every vessels of Class 1 passenger capacity 150 shall have at least one life boat with minimum passenger capacity of ten persons. The boat shall be provided with necessary equipment for launching. Boats are to be stowed on either side of the vessels if more than one boat is provided.
- f) Life boats plus life rafts together to accommodate 100% of the Passengers and crew onboard.
- g) All crew of should possess sufficient training in rescue and first aid.
- h) All boats shall have headlights, search lights, hand torches and emergency lanterns.

6C.3.2 An inland vessel of class II shall carry:-

- a) At least one life raft to accommodate all crew for vessel over 10 meters.
- b) One life jacket for each crew or person onboard.
- c) At least two life buoys for vessels up to 25 meter length and four life buoys for above 25 meter of which one shall be equipped with self-igniting light and buoyant line of 30 m in length.

6C.3.3 A manned inland vessel of class III shall carry:-

- a) One life jacket for every crew on board.
- b) At least two life buoys, one of which shall be equipped with self switching lights and buoyant line of 30 m in length.

6C.3.4 A manned inland vessel of class IV shall carry:-

- a) Every vessel of class IV up to 10 meter in length shall carry life jacket for each person.
- b) Vessel of 10 meters or more in length shall in addition to life jacket for each person carry sufficient life raft for all persons onboard.
- c) In vessels falling under sub-rule 6C3.4 (b) above, if the life rafts could not be accommodated, sufficient number of lifebuoys providing 100% buoyancy shall be provided.
- d) However all vessels of class IV shall carry at least 2 life buoys of which one shall be fitted with self-igniting light and buoyant line of 30 m in length.

**6C.4 Technical Requirements:-**

Every life saving appliances provided as per provisions of these rules shall be meeting the technical requirements contained in the International Life Saving Appliances Code and type approved by MMD or Competent Authority of the State. All life-saving appliances shall be properly stowed as per the approved plan and maintained / serviced as per the requirements of International Life Saving Appliances Code.

**LSA Technical  
Requirements**

**6C.5 Operational readiness, maintenance and inspection:-**

6C.5.1 Before vessels leave port and at all times during the voyage, all life-saving appliances on board shall be in working order and ready for immediate use.

**Maintenance  
& Inspection  
of LSA**

6C.5.2 Instructions for on-board maintenance of life-saving appliances shall be easily understood and illustrated where possible.

6C.5.3 The general emergency alarm system shall be tested weekly.

6C.5.4 Inflatable life-rafts shall be serviced at intervals of not more than 12 months at an approved servicing station. However, in cases where the service of a vessel and the location of approved service station make it impossible to comply with this requirement, the Competent Authority may allow this period to be extended but in no case shall this period be greater than 18 months.

6C.5.5 A report of the inspection shall be entered in the official log book.

**PART – D****LIGHTS, SOUND SIGNALS AND PREVENTION OF COLLISION**

**Part – D**  
**Lights,**  
**Sound**  
**Signals and**  
**Prevention**  
**of collusion**

**6D.1 Steering and Sailing Rules:-****6D.1.1 Look – Out:-**

Every vessel shall at all times maintain a proper look-out by sight and hearing as well as by all available means appropriate to the prevailing circumstances and conditions so as to make a full appraisal of the situation and of the risk of collision.

Every vessel shall make use of search lights to locate luminous marks used for channel marking.

**Steering &**  
**Sailing**  
**Rules**  
**Lock-Out**

**6D.1.2 Safe Speed:-**

- (1) Every vessel shall at all time proceed at a safe speed so that she can take proper and effective action to avoid collision and grounding, and be stopped within a distance appropriate to the prevailing circumstances and conditions.
- (2) In determining a safe speed the following factors shall be among those taken into account.
  - (a) The state of visibility;
  - (b) The traffic density including concentrations of fishing vessel or other vessels.
  - (c) The maneuverability of the vessel with special reference to stopping distance and turning ability in the prevailing conditions.
  - (d) The state of the river, wind, current / river stream and the proximity of navigational hazards;
  - (e) State and availability of shore navigational aids and channel marking by day and night;
  - (f) Speed restrictions imposed by the waterway authority;

**Safe Speed**

- (g) The draught of the vessel in relation to available depth of water; and
- (h) At nights, the presence of back ground light such as from the shore lights or from the back scatter other own lights.

#### 6D.1.3 Risk of collision:-

- (1) Every vessel shall use all available means appropriate to the prevailing circumstance and conditions to determine if risk of collision exists. If there is any doubt, such risk shall be deemed to exist.
- (2) In determining if risk of collision exists the following consideration shall be among those taken into account:-
  - (a) Such risk shall be deemed to exist if a compass bearing of an approaching vessel does not appreciably change and apparent distance from own vessel decreases;
  - (b) Such risk may sometimes exist even when an appreciable bearing change is evident, particularly when approaching a very large vessel or a low or when approaching a vessel at close range; and
  - (c) For vessel not fitted with a compass, if the relative position remains unchanged.

#### **Risk of Collision**

#### 6D.1.4 Action to avoid collision:-

- (1) Any action taken to avoid collision shall, if the circumstances of the case admit be positive, made in ample time and with due regard to the observance of good seamanship.
- (2) Any alteration of course or speed to avoid collision shall, if the circumstances of the case admit be large enough to be readily apparent to another vessel. A succession of small alternations of course and / or speed should be avoided.
- (3) If there is sufficient room, alteration of course and one may be the most effective action to avoid a close quarter's situation provided that it is made in good time, is substantial and does not result in another close quarter's situation.
- (4) Action taken to avoid collision with another vessel shall be such as to result in passing at a safe distance the effectiveness of the action shall be carefully checked until the other vessel is finally passed and clear.

#### **Action to Avoid Collision**

- (5) If necessary to avoid collision or allow more time to assess the situation, a vessel shall slacken her speed or take the way off by stopping or reversing her means of propulsion.

**6D.1.5 Narrow channels:-**

- (1) A vessel proceeding along the course of a narrow channel shall keep as near to the outer limit of the channel which lies on her starboard side as is safe and practicable. A vessel of less than 10 meters in length or a sailing vessel shall not impede the passage of a vessel which can safely navigate only within the marked channel.
- (2) A vessel engaged in fishing shall not impede the passage of any other vessel in the navigable channel;
- (3) A vessel shall not cross a navigable channel if such crossing impedes the passage of vessel proceeding up stream or downstream along the navigable channel;
- (4) A vessel nearing a bend or an area of narrow channel where other vessels may be obscured by an intervening obstruction shall navigate with particular alertness and caution and shall sound the appropriate signal;
- (5) Every vessel shall, if the circumstances of the case admit, avoid anchoring in a narrow channel.
- (6) When single lane traffic is in force, vessels shall join the lane only when the traffic signal permits to do so. While in the lane, the vessels shall proceed with maximum permissible speed and clear the channels as quickly as possible. Vessels shall not stop or anchor in a traffic lane and shall exercise caution while joining or leaving the single lane to avoid collision with waiting vessels at anchor.

**Narrow  
Channels**

**6D.2 Conduct of vessels in sight of one another:-**

**6D.2.1 Sailing vessels:-**

When two sailing vessels are in sight of one another or approaching one another so as to involve risk of collision, one of them shall keep out of way of the other as follows:-

**Conduct of  
Vessels in  
Sight of one  
another**

- (1) In a non-tidal river when one vessel is proceeding upstream and the other vessel proceeds downstream the vessel proceeding upstream shall keep out of the way of the other;
- (2) When both are proceeding, upstream or downstream and in a tidal lagoon the vessel which is to windward shall keep out of the way of the vessel which is to leeward;
- (3) A vessel which is running free shall keep out of the way of a vessel which is close-hauled; and
- (4) A vessel which is close-hauled on the port tack shall keep out of the way of a vessel which is close-hauled on the starboard tack.
- (5) For the purpose of these rules, upstream shall be deemed to be the direction against the current and downstream the direction with the current. Windward side shall be deemed to be the side opposite to that of which the main sail or the largest fore and after sail is carried.

**Sailing  
Vessels****6D.2.2 Overtaking:-**

- (1) Notwithstanding anything contained in these rules any vessel overtaking any other shall keep out of the way of the vessel being overtaken;
- (2) A vessel shall be deemed to be overtaking when coming up with another vessel from a direction more than 22.5 degrees abaft her beam. That is, in such a position with reference to the vessel she is overtaking, that at night she would be able to see only the stern light / towing light of that vessel but neither of her side lights; and
- (3) Any subsequent alternation or bearing between two vessels shall not make the overtaking vessel a crossing vessel within the meaning of these rules or relieve her duty of keeping clear of the over taken vessel until she is finally passed and cleared.

**Overtaking****6D.2.3 Head-on situation:-**

When two mechanically propelled vessels are meeting on reciprocal or nearly reciprocal courses so as to involve risk of collision each shall alter her course to starboard so that each shall pass on the port side of the other.

**Head-on  
Situation**

**6D.2.4 Crossing situation:-**

When two mechanically propelled vessels are crossing so as to involve risk of collision, the vessel which has the other on her own starboard side shall keep out of the way and shall, if the circumstances of the case admit avoid crossing ahead of the vessel.

**Crossing  
Situation**

**6D.2.5 Action by Give-way vessel:-**

6D.2.5.1 Where by any of the rules of Part E of this chapter, one of the two vessels is required to keep out of the way of the other vessel, the vessel required to keep out of the way of the other vessel is called as Give Way Vessel.

**Action by  
Give Way  
Vessel**

6D.2.5.2 Every vessel which is directed by these rules to keep out of the way of another vessel shall, so far as possible take early and substantial action to keep well clear.

**6D.2.6 Action by stand-on vessel:-**

6D.2.6.1 Whereby any of the rules of Part D of this chapter, one of the two vessels is required to keep out of the way of the other vessel, the other vessel is called as Stand on Vessel

**Action by  
Stand on  
Vessel**

6D.2.6.2 A Stand on Vessel shall keep her course and speed.

6D.2.6.3 The Stand on Vessel may however take action to avoid collision by her maneuver alone, as soon as it becomes apparent to her that the vessel required to keep out of the way is not taking appropriate action as required by these rules.

6D.2.6.4 When from any cause, the vessel required to keep her course and speed finds herself so close that collision cannot be avoided by the action of the give-way vessels along, she shall take such action as will best aid to avoid collision;

6D.2.6.5 A vessel which takes action in a crossing situation in accordance with sub paragraph 6D.2.6.3 of this rule to avoid collision with another vessel, shall if the circumstances of the case admit, not alter course to port for a vessel on her own port side; and

6D.2.6.6 These rules do not relieve the give-way vessel of her obligation to keep out of the way.



**6D.2.7 Responsibilities of (between) vessels:-**

6D.2.7.1 A mechanically propelled vessel underway shall keep out of the way of:-

- a) a vessel is not under command;
- b) a vessel restricted in her ability to man oeuvre;
- c) a vessel engaged in fishing;
- d) a sailing vessel, vessel under oars or country boat; and
- e) a vessel proceeding downstream by a vessel proceeding upstream, if the prevailing circumstances permit.

**Responsibilities  
Between  
Vessels**

6 D.2.7.2 A sailing vessel under way shall keep out of way of:-

- a) a vessel not under command;
- b) a vessel restricted in her ability to maneuver; and
- c) a vessel engaged in fishing.

6D.2.7.3 A vessel engaged in fishing when underway shall, so far as possible, keep out of the way of:

- a) a vessel not under command; and
- b) a vessel restricted in her ability to maneuver.

**6D.3 Conduct of vessel in restricted visibility:-**

6D.3.1 This rule applies to vessels not insight of one another when navigating in or near an area of restricted visibility;

6D.3.2 Every vessel shall make appropriate sound signals in accordance with these rules and exhibit lights while navigating in restricted visibility.

6D.3.3 Every vessel shall proceed at a safe speed adapted to the prevailing circumstances and conditions of restricted visibility. A mechanically propelled vessel shall have her engines ready for immediate maneuver.

6D.3.4 Every vessel shall have due regards to the prevailing circumstances and conditions of restricted visibility when complying with the rules of this part.

6D.3.5 Except where it has been determined that risk of collision does not exist every vessel which hears apparently forward her beam the fog signal of another vessel or which cannot avoid a close-quarter situation with another vessel forward of her beam, shall reduce her speed, she shall if

**Conduct of  
Vessels in  
Restricted  
Visibility**

necessary take all her way off and in any event navigate with extreme caution until danger of collision is over.

#### **6D.4 Lights & Shapes:-**

##### **6D.4.1 An application**

##### **Lights & Shapes**

##### **Application**

- a) Provisions of this Rule shall be complied with in all weather.
- b) The rules concerning lights shall be complied with from sunset to sunrise, and during such times no other lights shall be exhibited, except such, lights as cannot be mistaken for the lights specified in these rules, do not impair their visibility or distinctive character, or interfere with the keeping of a proper look-out.
- c) The lights prescribed by these rules shall, if carried, also be exhibited from sunrise to sunset in restricted visibility and may be exhibited in all other circumstances when it is deemed necessary.
- d) The rules concerning shapes shall be complied with by day.
- e) The lights and shapes unless otherwise specified in these rules shall comply with the positioning and technical details as per the provisions of Annex – 1 to International Rules for preventing of collision at sea (1972).

##### **6D.4.2 Different lights used in vessels**

##### **Different Lights**

- A) Masthead Light a white light placed over the fore and aft centerline of the vessel showing an unbroken light over an arc of the horizon of 225 degree and so fixed as to show the light from right ahead of 22.5 degree abaft the beam on either side of the vessel. This light shall be placed as far as practicable at height above the hull of not less than 3 meters for vessels of 20 meters or more in length and 2 meters for vessels of less than 20 meters in length.
- B) Side lights a green light on the star board side and a red light on the port side each showing an unbroken light over an arc of the horizon of 112.5 degrees and so fixed as to show the light from right ahead of 22.5 degrees abaft the beam on its respective side. In a vessel of less than 20 meters in length the sidelights may be

combined in one lantern carried the fore and aft centerline of the vessel. Side lights shall be placed not less than 1 meter below the mast head light.

- C) Stern light a white light placed as nearly as practicable at the stern showing an unbroken light over an arc of the horizon of 135 degree and so fixed as to show the light 67.5 degrees from right aft on each side of the vessel.
- D) Towing light a yellow light having the same character as – Stern light mentioned in sub rule (c) of this rule.
- E) All-round light a light showing an unbroken light over an arc of the horizon of 360 degrees.
- F) Flashing light a light flashing at regular intervals.

#### **6D.4.3 Visibility of Lights:-**

The lights prescribed in these rules shall be visible at the following minimum ranges:-

**Visibility of  
Lights**

- a) In a vessel of 20 meters or more in length, Masthead light 3 miles, Side lights 2 miles, Stern light 2 miles, Towing light 2 miles, All-Round light 1 mile.
- b) In a vessel less than 20 meters in length, Masthead light 2 miles, Side light 1 mile, Stern light 1 mile, All-Round light 1 mile.

#### **6D.4.4 Lights to be exhibited by mechanically propelled vessel under-way:-**

**Under-way  
Vessel  
Lights**

6D.4.4.1 A mechanically propelled vessel under-way shall exhibit:-

- a) A masthead light forward. A vessel of 50 meters or more in length shall exhibit an additional masthead light at a suitable place and higher than masthead light forward.
- b) Side lights.
- c) A stern light.

6D.4.4.2 A mechanically propelled vessel of less than 10 meters in length in-lieu of the lights prescribed in paragraph (1) may exhibit an all-round white light, and shall if practicable also exhibit side lights or a combined lantern.

**6D.4.5 Lights to be exhibited by towing & pushing vessels:-****Pushing &  
Towing  
Vessel  
Lights**

6D.4.5.1 A mechanically propelled vessel when towing or pushing shall exhibit:-

- a) Two masthead lights forward in a vertical line. When the length of the two exceeds 200 meters three such lights in a vertical line. These lights will be in-lieu of light prescribed in sub-rule 6D.4.4.1 (a). The lights shall be placed not less than 1 meter apart and the lowest light placed at a height not less than two meters above the hull.
- b) Side lights.
- c) A stern light.
- d) A towing light in a vertical line above the stern light.

6D.4.5.2 When a pushing vessel and a vessel being pushed ahead are connected in a composite unit, they shall be regarded as a mechanically propelled vessel and exhibit the lights prescribed in sub-rule 6D.4.4

6D.4.5.3 A vessel or object being towed shall exhibit:-

- a) Side lights.
- b) A stern light.

6D.4.5.4 Provided that any number of vessels being towed or pushed in a group shall be lighted as one vessel.

6D.4.5.5 A vessel being pushed ahead, not being part of a composite unit, shall exhibit at the forward end, side lights.

6D.4.5.6 A vessel being pushed towed alongside exhibit a stern light and at the forward end side lights.

6D.4.5.7 Where from any sufficient cause, it is impracticable for vessel or object being towed to exhibit the lights prescribed in this rule, all possible measures shall be taken to light the vessel or the object towed at least to indicate the presence of unlighted vessel or object.

**6D.4.6 Lights to be exhibited by sailing vessel and vessels under oars:-****Sailing  
Vessel &  
Vessel  
under Oars  
Light**

6D.4.6.1 A sailing vessel shall exhibit:-

- a) Side lights.
- b) A stern light.

6D.4.6.2 In a sailing vessel of less than 20 meters in length the lights prescribed in paragraph 6D.4.6. may be combined in one lantern carried at or near the top of the mast where it can be seen.

6D.4.6.3 A sailing vessel underway may in addition to the lights prescribed in paragraph 6D.4.6.1 of this rule, exhibit at or near the top of the mast where they can best be seen two all-round lights in a vertical line, the upper being red and lower be green.

6D.4.6.4 A sailing vessel less than 10 meters in length and a vessel under oars may exhibit lights prescribed in this rule, but if she does not, she shall have ready at hand an electric torch or lighted lantern showing white light which shall be exhibited in sufficient time to prevent collision.

**6D.4.7 Lights to be exhibited by fishing vessels:-**

6D.4.7.1 A vessel engaged in fishing shall exhibit:-

- a) Two all-round lights in a vertical line the upper being red and the low white and during the day a shape consisting of two cones with their apexes together in a vertical line or a basket.
- b) When making way through the water in addition to the lights prescribed in sub rule (a) above, side lights, and a stern light.

6D.4.7.2 A fishing vessel less than 10 m in length, a vessel under oars may exhibit lantern and shall have ready at hand an electric torch which shall be exhibited in sufficient time to prevent collision.

**6D.4.8 Lights to be exhibited by vessels not under command or restricted in their ability to maneuver:-**

6D.4.8.1 A vessel not under command shall exhibit:-

- a) Two all-round red lights in a vertical line where they can best be seen by night.
- b) Two balls or similar shapes in a vertical line by day.
- c) When making way through the water; side lights and a stern light addition to the lights prescribed in (a).

6D.4.8.2 A vessel restricted in her ability to maneuver shall exhibit:-

- a) Three all-round lights in a vertical line, the highest and lowest of these shall be red and the middle light shall be white.

**Fishing  
Vessel  
Lights**

**NUC &  
RAM  
Vessels  
Light**

- b) Three shapes in a vertical line, the highest and lowest shapes shall be balls and the middle one a diamond.
- c) When making way through the water, mast head lights, side lights and stern light in addition to the lights prescribed in (a)
- d) When at anchor, in addition to the lights and shapes prescribed in (a) and (b) above, lights and shapes prescribed in rule 6D.4.11 for anchored vessels shall also be exhibited.

**6D.4.9 Lights to be exhibited by vessels engaged in dredging:-**

A vessel engaged in dredging, in addition to the lights in Rule 6 D.4.8.2 shall exhibit by two all-round red lights or by day two balls in a vertical line to indicate the side on which obstruction exists.

**Lights to be  
exhibited by  
vessels  
engaged in  
dredging**

**6D.4.10 Lights to be exhibited by pilot vessels:-**

A vessel engaged on pilot age duty shall exhibit:-

- a) At or near the mast head two all – round lights in vertical line, the upper one white and the lower one red.
- b) When under way, in addition side lights and stern light.

**Pilot Vessel  
Lights**

**6D.4.11 Lights to be exhibited by anchored vessels and vessels aground:-**

6D.4.11.1 A vessel at an anchor shall exhibit:-

- a) In the fore part an all-round white light or one ball by day.
- b) At or near the stern and at a lower level than the light in (a), an all-round white light.

**Anchored &  
A grounded  
Vessel  
Lights**

6D.4.11.2 A vessel of less than 20 m in length may exhibit on all – round white light where it can be seen.

6D.4.11.3 A vessel grounded shall exhibit in addition to the lights prescribed in sub rule 6 D.4.11.1 and 6 D.4.11.2, where they can best be seen.

- a) Two all-round red lights in a vertical line.
- b) Three balls in a vertical line by day.

6D.4.11.4 In lieu of lights prescribed in this section, a vessel less than 10 m in length, a vessel under oars may exhibit lantern and shall have ready at hand an electric torch which shall be exhibited in sufficient time to prevent collision.

**6D.4.12 Lights to be exhibited by hydrofoils & mechanized country crafts:-**

**Hydrofoil &  
Country  
Craft Lights**

Where it is impracticable for a mechanized country craft or a hydrofoil to exhibit lights and shapes of the characteristics or in positions prescribed in the rules she shall exhibit lights and shapes as closely similar in characteristics and position as is possible.

**6D.5 Sound Signals:-**

**Sound  
Signals**

The sound signal appliances unless otherwise specified in these rules shall comply with the technical requirements as per the provisions of Annexure-III of the International Rules for prevention of collision at sea (1972)

**6D.5.1 Equipment for sound signals:-**

**Sound  
Signaling  
Equipment**

A vessel of 20 meters or more in length shall be provided with a whistle and a bell and a vessel of 100 meters or more in length, in addition shall be provided with a gong.

**6D.5.2 Maneuvering and warning signals:-**

**Maneuvering  
& Warning  
Signals**

6D.5.2.1 When vessels are in-sight of one another, a mechanically propelled vessel underway, when maneuvering as authorized or required by these rules, shall indicate her intentions by the following signals on her whistle.

- a) One short blast (a blast of about 1 second duration) to indicate – I am altering my course to star board.
- b) Two short blasts to indicate – I am altering course to port.
- c) Three short blasts to indicate – I am operating stern propulsion.

6D.5.2.2 An overtaking vessel and vessel being overtaken shall indicate their intention by sounding following signal:-

- a) Two prolonged blasts (blast of about 4 to 6 second duration each) followed by one short blast to indicate – I intend to overtake you on your starboard side.
- b) Two prolonged blasts followed by two short blasts to indicate – I intend to overtake you on your port side.

- c) A vessel being overtaken shall indicate her agreement by the following signals on her whistle; one prolonged, one short, one prolonged, one short blast, in that order. If in doubt she may sound signals prescribed in paragraph 6 D.5.2.3 below.
- d) When in doubt – When vessels in sight of one another are approaching each other and from any cause either vessel fails to understand the intentions or actions of the other or is in doubt whether sufficient action is being taken by the other to avoid collision, the vessel in doubt shall immediately indicate such doubt by giving at least 5 short and rapid blasts on the whistle, the signal may be supplemented by a light signal of at least 5 short rapid flashes.
- e) At bends – A vessel nearing bend or an area of a channel where other vessels may be obstructed, shall sound one prolonged blast, such signal shall be answered with a prolonged blast by any approaching vessel.

**6D.5.3 Sound signals in restricted visibility:-**

In or near an area of restricted visibility, where by day or night, signals prescribed in this rules shall be used as follows:-

- a) A mechanically propelled vessel making way through the water shall sound at intervals of not more than 2 minutes one prolonged blast.
- b) A mechanically propelled vessel underway by stopped and making no way through the water shall so at intervals of not more than 2 minutes two prolonged blasts in succession with an interval of about 2 seconds between them.
- c) A vessel not under command, a vessel restricted in her ability to maneuver, a vessel constrained by her draught, vessel engaged in towing, fishing or pushing another vessel, shall at intervals of not more than 2 minutes three blasts in succession namely one prolonged followed by two short blasts.

**Sound  
Signals in  
Restricted  
Visibility**



- d) A vessel at anchor shall at intervals of not more than one minute ring the bell rapidly for about 5 seconds. A vessel at anchor may in addition sound three blasts in succession namely one short, one prolonged and one short blast to give warning on her position, and possibility of collision to any approaching vessels. A vessel aground shall give three separate and distinct strokes on the bell immediately before and after the rapid ringing of the bell.
- e) A vessel of less than 10 meters in length shall not be obliged to give the above mentioned signals but shall make some other effective sound signals at intervals or not more than 2 minutes.

#### **6 D.6 Distress Signals:-**

When a vessel is in distress and require assistance from other vessels or from shore, the following shall be the signals to be used or displayed by her either together or separately.

#### **Distress Signals**

- a) A continuous sounding of any sound signal apparatus.
- b) A flag or a light waved in a circle to draw attention.
- c) Flares on the deck.
- d) "May day" transmitted by radio telephony.
- e) International code signal N. C. hoisted on the vessel.

#### **6 D.7 Exemptions:-**

Any vessel (or class of vessels) whose keel is laid or which is at corresponding stage of construction before the entry into force of these rules may be exempted from compliance there with of the following provisions until two years after the date of entry into force of these rules.

#### **Exemptions**

- a) The installation of lights with color specifications and intensity as prescribed in these rules.
- b) Repositioning of masthead lights and side lights on vessels resulting from application of these rules.
- c) The installation of lights with ranges prescribed in these rules

**6 D.8 Application of the provision of Port Rules and National Waterway Rules:-**

Notwithstanding anything mentioned above, the provisions of the Port Rules & Merchant Shipping (Prevention of Collision at sea) (Amendment) Regulation, 2002 for National Waterways shall also apply mutatis, to the mechanically propelled vessels while making voyages within the port limits and National waterways

**Port &  
National  
Waterway  
Mutatis  
Application**

**PART – E****RADIO COMMUNICATION AND SAFETY OF NAVIGATION****Part E****Radio****Communi-  
cation and  
safety of  
navigation**

For the purpose of this section, categorization of vessels is as per rule 2.2 of these rules. Vessels shall carry the radio and navigation equipment's as per the below table:-

| <b>Equipment</b>  | <b>Category A</b> | <b>Category B</b> |
|---|-------------------|-------------------|
| VHF radio installation capable of transmitting DSC on channel 70, and radiotelephony on channels 16, 13 and 6 | 1                 | 1                 |
| NAVTEX receiver   | 1                 | 1                 |
| SART  | 1                 | 0                 |
| Class A Automatic Identification System (AIS)   | 1                 | 1                 |
| Radar Operating on 9 GHz  | 1                 | 0                 |
| Echo Sounder  | 1                 | 1                 |
| Magnetic Compass – for steering and bearing   | 1                 | 1                 |
| Gyro Compass with repeaters for steering and bearing  | 1                 | 0                 |
| Rudder Angle Indicator  | 1                 | 1                 |
| Global Positioning System (GPS)   | 1                 | 1                 |
| Binocular   | 1                 | 1                 |
| Aldis Lamp or Searchlight   | 1                 | 1                 |
| Passage Charts  | Yes               | Yes               |
| Area Tide Tables  | Yes               | Yes               |
| Aneroid Barometer   | 1                 | 1                 |

**CHAPTER - VII**  
**INSURANCE OF MECHANICALLY PROPELLED VESSELS AGAINST THIRD**  
**PARTY RISKS**

**7.1 Requirement of Chapter VI A of the Act:-**

As per the provisions of section 54 C of Chapter - 5 A of the Act the provisions of Section 134, Chapter X, XI and XII of the Motor Vehicles Act, 1988 shall mutatis mutally apply, in relation to the mechanically propelled vessels as they apply in relation to motor vehicles, subject to certain modifications listed therein

**Require-  
ments of  
Chapter VI  
A of the Act**  
*mutatis  
mutandis*

**7.2 Duty of Master of an Inland Vessel in case of accident and injury to a person**

When any person is injured or any property of a third party is damaged, as a result of an accident in which an Inland Vessel is involved, the Master of the Inland Vessel or any other person in charge of the Inland Vessel shall:-

**Duties of  
Master in  
case of  
Accident  
and Injury  
to a person**

- (a) Unless it is not practicable to do so on account of mob fury or any other reason beyond his control, take all reasonable steps to secure medical attention for the injured person, by conveying him to the nearest medical practitioner or hospital, and it shall be the duty of every registered medical practitioner or the doctor on duty in the hospital immediately to attend to the injured person and render medical aid or treatment without waiting for any procedural formalities, unless the injured person or his guardian, in case he is a minor, desired otherwise;
- (b) Give on demand by a police officer any information required by him or, if no police officer is present, report the circumstances of the occurrence, including the circumstances, if any, or not taking reasonable steps to secure medical attention as required under rule (a), at the nearest police station as soon as possible, and in any case within twenty-four hours of the occurrence;

(c) Give the following information in writing to the insurer, who has issued the certificates of insurance, about the occurrence of the accident, namely:-

- I. Insurance policy number and period of its validity;
- II. Date, time and place of accident;
- III. Particulars of the persons injured or killed in the accident;
- IV. Name of the Master of the Vessel and the particulars of his certificate granted under Chapter III of the Inland Vessels Act, 1917.

**Explanation:-** For the purposes of this rule, the expression – Master of a Vessel includes the owner of the Inland Vessel

**Objects and Reasons: -** Rule 7.2 sets out the duties of the Master of a Vessel involved in accident, such as reporting the accident to the Police Station, rendering medical aid to the injured, etc.

### **7.3 Liability without fault in certain cases:-**

#### **7.3.1 Liability to pay compensation in certain cases on the principle of no fault:-**

**Liability  
without  
fault in  
certain  
cases**

- 1) Where death or permanent disablement of any person has resulted from an accident arising out of the use of an Inland Vessel, the owner of the Inland Vessel shall, or, as the case may be, the owners of the Inland Vessel shall, jointly and severally, be liable to pay compensation in respect of such death or disablement in accordance with the provisions of this section.
- 2) The amount of compensation which shall be payable under sub section in respect of death of any person shall be fixed sum of fifty thousand rupees and the amount of compensation payable under that sub-section in respect of permanent disablement of any person shall be fixed sum of twenty-five thousand rupees.
- 3) In any claim for compensation under sub rule (1), the claim and shall not be required to plead and establish that the death or permanent disablement in respect of which the claim has been made was due to any wrongful act, neglect or default of the owner or owners of the Inland Vessel concerned or of any other person

- 4) A claim for compensation under sub rule (1) shall not be defeated by reason of any wrongful act, neglect or default of the person in respect of whose death or permanent disablement the claim has been made nor shall the quantum of compensation recoverable in respect of such death or permanent disablement be reduced on the basis of the share of such person in the responsibility for such death or permanent disablement.
- 5) Notwithstanding anything contained in sub rule (2) regarding death or bodily injury to any person, for which the owner of the Inland Vessel is liable to give compensation for relief, he is also liable to pay compensation under any other law for the time being in force; Provided that the amount of such compensation to be given under any other law shall be reduced from the amount of compensation payable under this rule.

**Objects and Reasons:-** Rule 7.3.1 provides for liability to pay compensation in certain cases on the principle of no fault.

**7.3.2 Provisions as to other right to claim compensation for death or permanent disablement:-**

- 1) The right to claim compensation under rule 7.3.1 in respect of death or permanent disablement of any person shall be in addition to any of other right, except the right (such other right here after in this section referred to as the right on the Principle of fault) to claim compensation in respect thereof under any other provision of this Act or of any other law for the time being in force.
- 2) A claim for compensation under rule 7.3.1 in respect of death or permanent disablement of any person shall be disposed of as expeditiously as possible and where compensation is claimed in respect of such death or permanent disablement under rule 7.3.1 and also in pursuance of any right on the principle of fault, the claim for compensation under rule 7.3.1 shall be disposed of as aforesaid in the first place.

**Right to  
claim  
compensa-  
tion for  
death or  
permanent  
disable-  
ment**

- 3) Notwithstanding anything contained in sub-rule above(1), where in respect of the death or permanent disablement of any person, the person liable to pay compensation under rule 7.3.1 is also liable to pay compensation in accordance with the right on the principle of fault, the person so liable shall pay the first – mentioned compensation and:-
- a) If the amount of the first-mentioned compensation is less than the amount of the second-mentioned compensation, he shall be liable to pay (in addition to the first-mentioned compensation) only so much of the second-mentioned compensation as is equal to the amount by which it exceeds the first-mentioned compensation;
- b) If the amount of the first-mentioned compensation is equal to or more than the amount of the second-mentioned compensation, he shall not be liable to pay the second-mentioned compensation.

**Objects and Reasons:-** Rule 7.3.2 makes provision to claim compensation for death or permanent disablement besides the claim for compensation for no fault liability.

### **7.3.3 Permanent disablement:-**

For the purposes of this Chapter, permanent disablement of a person shall be deemed to have resulted from an accident of the nature referred to in sub-rule (1) of rule 7.3.1 if such person has suffered by reason of the accident, any injury of injuries involving:-

- a) Permanent privation of the sight of either eye or the hearing of either ear, or privation of any member or joint; or
- b) Destruction or permanent impairing of the powers of any members or joint; or
- c) Permanent disfiguration of the head or face.

**Objects and Reasons:-** Rule 7.3.3 seeks to classify injuries which are considered as permanent disablement for the purpose of Motor Vehicles Act, 1988.

**Permanent  
Disablement**

**7.3.4 Applicability of Chapter to certain claims under Act 8 of 1923:-**

The provisions of this Chapter shall also apply in relation to any claim for compensation in respect of death or permanent disablement of any person under the Workmen's Compensation Act, 1923 (8 of 1923) resulting from an accident of the nature referred to in sub-rule (1) of rule 7.3.1 and for this purpose, the said provisions shall, with necessary modifications, be deemed to form part of that Act.

**Applicability  
of chapter to  
certain  
claims under  
Act 8 of 1923**

**Objects and Reasons:-** Rule 7.3.4 lays down that the provision of this Chapter shall also apply in relation to any claims under Workmen's Compensation Act.

**7.4 Insurance of an Inland Vessel against third party risks:-****7.4.1 Definitions:-** In this Chapter:-

- a. "Authorized insurer" means an insurer for the time being carrying on general insurance business in India under the General Insurance Business (Nationalization) Act, 1972, and any Government Insurance Fund authorized to do general insurance business under that Act.

**Insurance of  
an Inland  
Vessel  
against  
Third Party  
Risks**

"Goods service vessel" means any mechanically propelled vessel used or adapted to be used for carrying of cargo for hire or reward;

**Definitions**

- b. Certificate of insurance means a certificate issued by an authorized insurer in pursuance of sub rule (3) of rule 7.4.3 and includes a cover not complying with such requirements as may be prescribed, and where more than one certificate has been issued in connection with a policy, or where a copy of a certificate has been issued, all those certificates or that copy, as the case may be;
- c. liability, where used in relation to the death of or bodily injury to any person, includes liability in respect thereof under rule 7.3.1;
- d. policy of insurance includes – (certificate of insurance) "public service vessel" means any mechanically propelled vessel used or adapted to be used for the carriage of passengers for hire or reward;



- e. "property" includes goods carried in the inland vessel, bridges, landing facilities, navigation marks and infrastructure;
- f. Reciprocating country means any such country as may on the basis of reciprocity be notified by the Central Government in the Official Gazette to be a reciprocating country for the purpose of this Chapter fa) "Route" means a line of travel which specifies the waterway which may be traversed by a mechanically propelled vessel between one terminal and another;
- g. Third party includes the Government.

**Objects and Reasons:-** Rule 7.4.1 seeks to define certain words and expressions appearing in rule 7.4 of this Chapter.

#### **7.4.2 Necessity for insurance against third party risk:-**

- 1) No person shall use, except as a passenger, or cause or allow any other person to use, an Inland Vessel in an Inland Waterway, unless there is in force in relation to the use of the Inland Vessel by that person or that other person, as the case may be, a policy of insurance complying with the requirements of this Chapter.

**Necessity of  
Insurance  
against  
third party  
risk**

Provided that in the case of an Inland Vessel carrying, or meant to carry, dangerous or hazardous goods, there shall also be a policy of insurance under the Public Liability Insurance Act, 1991 (6 of 1991).

**Explanation:-** The Master or person in-charge of an inland Vessel working merely as a paid employee, while there is in force in relation to the use of the Inland Vessel no such policy as is required by this sub-section, shall not be deemed to act in contravention of the sub-r unless he knows or has reasons to believe that there is no such policy in force.

- 2) Sub rule (1) shall not apply to any Inland Vessel owned by the Central Government or a State Government and used for Government purposes unconnected with any commercial enterprise.
- 3) The appropriate Government may, by order, exempt from the operation of sub rule (1) on any Inland Vessel owned by any of the following authorities, namely:-

- a) The Central Government or a State Government if the Inland Vessel is used for Government purposes connected with any commercial enterprise;
- b) any local authority;
- c) Any State Water Transport undertaking;

Provided that no such order shall be made in relation to any such authority unless a fund has been established and is maintained by that authority in accordance with the rules made in that behalf under Motor Vehicles Act, 1988 for meeting any liability arising out of the use of any Inland Vessel of that authority which that authority or any person in its employment may incur to third party.

**Explanation:-** For the purpose of this sub-section, appropriate Government means the Central Government or a State Government, as the case may be, and:-

- I. In relation to any corporation or company owned by the Central Government or any State Government, means the Central Government or that State Government;
- II. In relation to any corporation or company owned by the Central Government and one or more State Governments, means the Central Government;
- III. In relation to any other State Water Transport undertaking or any local authority, means that Government which has control over that undertaking or authority.

**Objects and Reasons:-** Rule 7.4.2 speaks of the necessity for insurance against third party risk.

#### **7.4.3 Requirement of policies and limits of liability:-**

- 1) In order to comply with the requirements of this Chapter, a policy of insurance must be a policy which:-
  - a) Is issued by a person who is an authorized insurer; and
  - b) Insures the person or classes of persons specified in the policy to the extent specified in sub rule (2) -
    - i. against any liability which may be incurred by him in respect of the death of or bodily injury to any person, including owner of the goods or

**Require-  
ment of  
Policies and  
limits of  
liability**

his authorized representative carried in the Inland Vessel or damage to any property of a third party caused by or arising out of the use of the Inland Vessel in an Inland Waterway;

- ii. Against the death of or bodily injury to any passenger of a public service vessel caused by or arising out of the use of the Inland Vessel in an Inland Water;

Provided that a policy shall not be required:-

- i. To cover liability in respect of the death, arising out of and the course of this employment, of the employee of a person insured by the policy or in respect of bodily injury sustained by such an employee arising out of and in the course of his employment other than a liability arising under the Workmen's Compensation Act, 1923 (8 of 1923), in respect of the death of, or bodily injury to, any such employee:-
  - a) engaged as Master or person-in-charge of the Inland Vessel, or
  - b) If it is a goods carriage, being carried in the Inland Vessel, or
- ii. To cover any contractual liability.

**Explanation:-** For the removal of doubts, it is hereby declared that the death of or bodily injury to any person or damage to any property of a third party shall be deemed to have been caused by or to have arisen out of, the use of an Inland Vessel in Inland Water notwithstanding that the person who is dead or injured or the property which is damaged was not in a Inland Water at the time of the accident, if the act or omission which led to the accident occurred in Inland Water.

- 2) Subject to the proviso to sub rule (1), a policy of insurance referred to in sub rule (1), shall cover any liability incurred in respect of any accident, up to the following limits, namely:-
  - a) Save as provided in rule (b), the amount of liability incurred.
  - b) In respect of damage to any property of a third party, a limit of rupees six thousand:
- 3) A policy shall be of no effect for the purpose of this Chapter unless and until it is issued by the insurer in favor of the person by whom the policy is effected a certificate of insurance in the prescribed form and containing the prescribed particulars of any condition subject to which

the policy is issued and of any other prescribed matters; and different forms, particulars and matter may be prescribed in different cases.

- 4) Where a cover note issued by the insurer under the provisions of this Chapter or the rules made there under is not allowed by a policy of insurance within the prescribed time, and insurer shall, within seven days of the expiry of the period of the validity of the cover note, notify the fact to the registering authority in whose records the Inland Vessel to which the cover note relates has been registered or to such other authority as the State Government may prescribe.
- 5) Notwithstanding anything contained in any law for the time being in force, an insurer issuing a policy of insurance under this section shall be liable to indemnify the person or classes of persons specified in the policy in respect of any liability which the policy purports to cover in the case of that person or those classes of persons.

**Objects and Reasons:-** Rule 7.4.3 lays down the requirements of the policies and the limits of liability in respect of passengers and persons other than passengers in relation to passenger vessels and goods carriages.

#### **7.4.4 Validity of policies of insurance issued in reciprocating countries:-**

Where, in pursuance of an arrangement between India and any reciprocating country, the Inland Vessel registered in the reciprocating country operates on any route or within any area common to the two countries and there is in force in relation to the use of the Inland Vessel in the reciprocating country, a policy of insurance complying with the requirements of the law of insurance in force in that country, then, notwithstanding anything contained in rule 7.4.3 but subject to any rules, such policy of insurance shall be effective throughout the route or area in respect of which, the arrangement has been made, as if the policy of insurance had complied with the requirements of this Chapter.

**Objects and Reasons:-** Rule 7.4.4 provides for the validity of policies of insurance issued in a reciprocating country in respect of Inland Vessels of the reciprocating country operating on any route common to the two countries.

**Validity of  
Policies of  
Insurance in  
Reciproca-  
ting  
Countries**

**7.4.5 Duty of insurers to satisfy judgments and awards against persons insured in respect of third party risks:-****Duties of Insurer to satisfy judgments and awards**

- 1) If, after a certificate of insurance has been issued under sub rule (3) of rule 7.4.3 in favor of the person by whom a policy has been effected, judgment or award in respect of any such liability as is requirement to be covered by a policy under rule (b) of sub rule (1) of rule 7.4.3 (being a liability covered by the terms of the policy) is obtained against any person insured by the policy, then, notwithstanding that the insurer may be entitled to avoid or cancel or may have avoided or cancelled the policy, the insurer shall, subject to the provisions of this section, pay to the person entitled to the benefit of the decree any sum not exceeding the sum assured payable there under, as if he were the judgment debtor, in respect of the liability, together with any amount payable in respect of costs and any sum payable in respect of interest on that sum by virtue of any enactment relating to interest on judgments.
- 2) No sum shall be payable by an insurer under sub rule (1) in respect of any judgment or award unless, before the commencement of the proceedings in which the judgment or award is given the insurer had notice through the Court or, as the case may be, the Claims Tribunal of the brining of the proceedings, or in respect of such judgment or award so long as execution is stayed thereon pending an appeal; and an insurer to whom notice of the brining of any such proceedings is so given shall be entitled to be made a party there to and to defend the action on any of the following grounds, namely:-
  - A) That there has been a breach of a specified condition of the policy, being one of the following conditions, namely:-
    - I. a condition excluding the use of the Inland Vessel:-
      - a. for hire or reward, where the Inland Vessel is on the date of the contract of insurance an Inland Vessel not covered by a certificate of registration granted under section 19F of the Inland Vessels Act 1917 to ply for hire or reward, or
      - b. for organized racing and speed testing, or

- c. for a purpose not allowed by the certificate of registration granted under section 19F of the Inland Vessels Act 1917 under which the Inland Vessel is used, where the Inland Vessel is a "public service vessel or goods service vessel."
- II.** a condition excluding manning by a named person or persons or by any person who is "not holding a certificate granted under Chapter III of the Inland Vessels Act, 1917", or by any person who has been disqualified for holding or obtaining a certificate granted under Chapter III of the Inland Vessels Act 1917 during the period of disqualification; or
- III.** a condition excluding liability for injury caused or contributed to by conditions of war, civil war, riot or civil commotion; or
- B)** That the policy is void on the ground that it was obtained by the non-disclosure of a material fact or by a representation of fact which was false in some material particular.
- 3) Where any such judgment as is referred to in sub rule (1) is obtained from a Court in a reciprocating country and in the case of a foreign judgment is, by virtue of the provisions of section 13 of the Code of Civil Procedure, 1908 (5 of 1908) conclusive as to any matter adjudicated upon by it, the insurer (being an insurer registered under the Insurance Act, 1938 (4 of 1938) and whether or not he is registered under the corresponding law of the reciprocating country) shall be liable to the person entitled to the benefit of the decree in the manner and to the extent specified in sub rule (1), as if the judgment were given by a Court in India;

Provided that no sum shall be payable by the insurer in respect of any such judgment unless, before the commencement of the proceedings in which the judgment is given, the insurer had notice through the Court concerned of the bringing of the proceedings and the insurer to whom notice is so given is entitled under the corresponding law of the reciprocating country, to be made a party to the proceedings and to defend the action on grounds similar to those specified in sub rule (2).

- 4) Where a certificate of insurance has been issued under sub rule (3) of rule 7.4.3 to the person by whom a policy has been effected, so much of the policy as purports to restrict the insurance of the persons insured thereby by reference to any conditions other than those in clause (b) of the sub rule (2) shall, as respects such liabilities as are required to be covered by a policy under clause (b) of sub rule (1) of rule 7.4.3 be of no effect:

Provided that any sum paid by the insurer in or towards the discharge of any liability of any person which is covered by the policy by virtue only of this sub-section shall be recoverable by the insurer from that person.

- 5) If the amount which an insurer becomes liable under this section to pay in respect of a liability incurred by a person insured by a policy exceeds the amount for which the insurer would apart from the provisions of this section be liable under the policy in respect of that liability, the insurer shall be entitled to recover the excess from that person.
- 6) In this section the expression – material fact and – material particular means, respectively, a fact or particular of such a nature as to influence the judgment of a prudent insurer in determining whether he will take the risk and, if so at what premium and on what conditions, and the expression – liability covered by the terms of the policy means liability which is covered by the policy or which would be so covered but for the fact that the insurer is entitled to avoid or cancel or has avoided or cancelled the policy.
- 7) No insurer to whom the notice referred to in sub rule (2) or sub rule (3) has been given shall be entitled to avoid his liability to any person entitled to the benefit of any such judgment or award as is referred to in sub rule (1) of in such judgment as is referred to in sub rule (3) otherwise than in the manner provided for in sub rule (2) or in the corresponding law of the reciprocating country, as the case may be.

**Explanation:-** For the purpose of this section, - Claims Tribunal means a Claims Tribunal constituted under rule 7.5.1 and award means an award made by that Tribunal under rule 7.5.4

**Objects and Reasons:-** Rules 7.4.5 lays down that it is the duty of the insurer to satisfy judgments against persons insured in respect of third party risk.

**7.4.6 Rights of third parties against insurers on insolvency of the insured:-**

**Rights of  
Third  
Parties  
against  
insurers on  
insolvency  
of the  
Insured**

- 1) Where under any contract of insurance effected in accordance with the provisions of this Chapter, a person is insured against liabilities which he may incur to third parties, then:-
  - a) In the event of the person becoming insolvent or making a composition or arrangement with his creditors, or
  - b) Where the insured person is a company, in the event of a winding-up order being made or a resolution for a voluntary winding-up being passed with respect to the company or of a receiver or manager of the company's business or undertaking being duly appointed, or of possession being taken by or on behalf of the holders of any debentures secured by a floating charge of any property comprised in or subject to the charge, if, either before or after that event, any such liability is incurred by the insured person, his rights against the insurer under the contract in respect of the liability shall, notwithstanding anything to the contrary in any provision of law, be transferred to and vest in the third party to whom the liability was so incurred.
- 2) Where an order for the Administration of the estate of a deceased debtor is made according to the law of insolvency, then, if any debt provable in insolvency is owing by the deceased in respect of a liability to a third party against which he was insured under a contract of insurance in accordance with the provision of this Chapter, the deceased debtor's rights against the insurer in respect of that liability shall, notwithstanding anything to the contrary in any provision of law, be transferred to and vest in the person to whom the debt is owing.
- 3) Any condition in a policy issued for the purposes of this Chapter purporting either directly or indirectly to avoid the policy or to alter the rights of the parties there under upon the happening to the insured



person of any of the events specified in rule (a) or rule (b) of sub rule (1) or upon the making of an order for the Administration of the estate of a deceased debtor according to the law of insolvency shall be of no effect.

- 4) Upon a transfer under sub rule (1) or sub rule (2), the insurer shall be under the same liability to the third party as he would have been to the insured person, but:-
- a. If the liability of the insurer to the insured person exceeds the liability of the insured person to the third party, nothing in this Chapter shall affect the rights of the insured person against the insurer in respect of the excess, and
  - b. If the liability of the insurer to the insured person is less than the liability of the insured person to the third party, nothing in this Chapter shall affect the rights of the third party against the insured person in respect of the balance.

**Objects and Reasons:-** Rule 7.4.6 provides that in event of the insured becoming insolvent any liability incurred by the insured person and his rights against the insurer will be transferred to and vest in the third party to whom the liability was so incurred.

#### **7.4.7 Duty to give information as to insurance:-**

- 1) No person against whom a claim is made in respect of any liability referred to in rule (b) of sub rule (1) of rule 7.4.3 shall on demand by or on behalf of the person making the claim refuse to state whether or not he was insured in respect of that liability by any policy issued under the provisions of this Chapter, or would have been so insured if the insurer had not avoided or cancelled the policy, nor shall he refuse, if he was or would have been so insured, to give such particulars with respect to that policy as were specified in the certificate of insurance issued in respect hereof.
- 2) In the event of any person becoming insolvent or making a composition or arrangement with his creditors or in the event of an order being made for the Administration of the estate of a deceased person according to the law of insolvency, or in the event of a winding-up order being made

**Duties to  
give  
information  
as to  
insurance**

or a resolution for a voluntary winding-up being passed with respect to any company or of a receiver or manager of the company's business or undertaking being duly appointed or of possession being taken by or on behalf of the holders of any debentures secured by a floating charge or any property comprised in or subject to the charge, it shall be the duty of the insolvent debtor, personal representative of the deceased debtor or company, as the case may be, or the official assignee or receiver in insolvency, trustee, liquidator, receiver or manager, or person in possession of the property to give at the request of any person claiming that the insolvent debtor, deceased debtor or company is under such liability to him as is covered by the provision of this Chapter, such information as may reasonably be required by him for the purpose of ascertaining whether any rights have been transferred to and vested in him by rule 7.4.6 and for the purpose of enforcing such rights, if any; and any such contract of insurance as purports whether directly or indirectly to avoid the contract or to alter the rights of the parties there under upon the giving of such information in the events aforesaid, or otherwise to prohibit or prevent the giving thereof in the said events, shall be of no effect.

- 3) If, from the information given by any person in pursuance of sub rule (2) or otherwise, he has reasonable ground for supporting that there have or may have been transferred to him under this Chapter rights against any particular insurer, that insurer shall be subject to the same duty as is imposed by the said sub-rule on the persons there in mentioned.
- 4) The duty to give the information imposed by this section shall include a duty to allow all contracts of insurance, receipts for premiums, and other relevant documents in the possession or power of the person on whom the duty so imposed to be inspected and copies thereof to be taken.

**Objects and Reasons:-** Rule 7.4.7 prescribes that it is the duty of the insured to give information relating to the insurance on demand by or on behalf of the person making the claim for compensation.

**7.4.8 Settlement between insurers and insured persons:-**

- 1) No settlement made by an insurer in respect of any claim which might be made by a third party in respect of any liability of the nature referred to in rule (b) of sub rule (1) of rule 7.4.3 shall be valid unless such third party is a part of the settlement.
- 2) Where a person who is insured under a policy issued for the purpose of this Chapter has become insolvent, or where, if such insured person is a company, a winding-up order has been made or a solution for a voluntary winding-up has been passed with respect to the company, no agreement made between the insurer and the insured person after the liability has been incurred to a third party and after the commencement of the insolvency or winding-up, as the case may be, nor any waiver, assignment or other disposition made by or payment to the insured person after the commencement aforesaid shall be effective to defeat the rights transferred to the third party under this Chapter, but those rights shall be the same as if no such agreement, waiver, assignment or disposition or payment has been made.

**Settlement  
between  
insurers and  
insured  
persons**

**Objects and Reasons:-** Rule 7.4.8 lays down that any settlement made by the insurer in respect of any claim which may be the third party will not be valid unless the third party is a party to the claim.

**7.4.9 Saving in respect of rules 7.4.6, 7.4.7 and 7.4.8:-**

- 1) For the purpose of rule 7.4.6, 7.4.7 and 7.4.8 a reference to liabilities to third parties in relation to a person insured under any policy of insurance shall not include a reference to any liability of that person in the capacity of insurer under some other policy of insurance.
- 2) The provisions of rule 7.4.6., 7.4.7 and 7.4.8 shall not apply where a company is wound-up voluntarily merely for the purpose of reconstruction or of an amalgamation with another company.

**Saving in  
respect of  
rule 7.4.6,  
7.4.7 and  
7.4.8**

**Objects and Reasons:-** Clause 7.4.9 lays down that the liability of the insurer will be only in respect of that particular policy alone and not in respect of any other policy of insurance.

#### **7.4.10 Insolvency of insured persons not to affect liability of insured or claims by third party:-**

Where a certificate of insurance has been issued to the person by whom a policy has been effected, the happening in relation to any person insured by the policy of any such event as is mentioned in sub rule (1) or sub rule (2) of section 7.4.6 shall, notwithstanding anything contained in this Chapter, not affecting any liability of that person of the nature referred to in clause (b) of sub rule (1) of section 7.4.3; but nothing in this section shall affect any rights against the insurer conferred under the provisions of section 7.4.6, 7.4.7 and 7.4.8 on the person to whom the liability was incurred.

**Insolvency of insured person not to affect liability of insured or claims by third party**

**Objects and Reasons:-** Clause 7.4.10 provides that the insolvency of the insured will not affect the liability of the insured or affect the claims of third party or the rights against the insurer.

#### **7.4.11 Effect of death on certain causes of action:-**

Notwithstanding anything contained in section 306 of the Indian Succession Act, 1925 (39 of 1925) of the death of a person in whose favor a certificate of insurance had been issued, if it occurs after the happening of an event which has given rise to a claim under the provisions of this Chapter, shall not be a bar to the survival of any cause of action arising out of the said event against his estate or against the insurer.

**Effect of death on certain causes of action**

**Objects and Reasons:-** Rule 7.4.11 makes it clear that in the event of the death of the insured after the happening of an accident in which his Inland Vessel was involved, the rights of third party will not be barred against the insured or his estate.

#### **7.4.12 Effect of certificate of insurance:-**

When an insurer has issued a certificate of insurance in respect of a contract of insurance between the insurer and the insured person, then:-

**Effect of Certificate of Insurance**

- a) If and so long as the policy described in the certificate has not been issued by the insurer to the insured, the insurer shall, as between himself and any other person except the insured, be deemed to have issued to the insured person a policy of insurance conforming in all respects with the description and particulars stated in such certificate; and
- b) If the insurer has issued to the insured the policy described in the certificate, but the actual terms of the policy are less favorable to persons claiming under or by virtue of the policy against the insurer either directly or through the insured than the particulars of the policy as stated in the certificate, the policy shall, as between the insurer and any other person except the insured, be deemed to be in terms conforming in all respects with the particulars stated in the said certificate.

**Objects and Reasons:-** Rule 7.4.12 provides that where the insurer has issued a certificate of insurance, and the policy of insurance has not been issued, then the policy to be issued be deemed to be in terms confirming in all respects to the particulars mentioned in the certificate of insurance.

#### **7.4.13 Transfer of certificate of insurance:-**

- 1) Where a person in whose favor the certificate of insurance has been issued in accordance with the provisions of this Chapter transfer to another person the ownership of the Inland Vessel in respect of which such insurance was taken together with the policy of insurance relating thereto, the certificate of insurance and the policy described in the certificate shall be deemed to have been transferred in favor of the person to whom the Inland Vessel is transferred with effect from the date of its transfer.

#### **Transfer of Certificate of Insurance**

**Explanation:-** For the removal of doubts, it is hereby declared that such deemed transfer shall include transfer of rights and liabilities of the said certificate of insurance and policy of insurance.

- 2) The transferee shall apply within fourteen days from the date of transfer in the prescribed form to the insurer for making necessary changes in regard to the fact of transfer in the certificate of insurance and the policy described in the certificate in his favor and the insurer shall make the necessary changes in the certificate and the policy of insurance in regard to the transfer of insurance.

**Objects and Reasons:-** Rule 7.4.13 lays down that when the certificate of registration is transferred from one person to another, then the policy of insurance in respect of that Inland Vessel is also deemed to have been transferred to that other person from the date on which the ownership of the Inland Vessel stands transferred.

**7.4.14 Production of certain certificates, license, and a certificate of registration granted under section 19F of the Inland Vessels Act, 1917 in certain cases:-**

**Production  
of certain  
certificates**

- 1) The Master or person in-charge of an Inland Vessel shall, on being so required by a police officer in uniform authorized in this behalf by the State Government, produce:—
  - a) The certificate of insurance;
  - b) The certificate of registration;
  - c) The certificate granted under Chapter III of the Indian Vessels Act, 1917; and
  - d) The certificate of survey granted under Section 9 of the Inland Vessels Act, 1917.
- 2) If, where owing to the presence of an Inland Vessel in an Inland Water an accident occurs involving death or bodily injury to another person, the Master of the Inland Vessel does not at the time produce the certificate, a certificate granted under Chapter III of the Inland Vessels Act 1917 and a certificate of registration granted under section 19F of the Inland Vessels Act 1917 referred to in sub rule (1) of the police officer, he shall produce the said certificates, license and a certificate of registration granted under section 19F of the Inland Vessels Act 1917 at the police station at which he makes the report required by rule. 7.2

- 3) No person shall be liable to conviction under sub rule (1) or sub rule (2) by reason only of the failure to produce the certificate of insurance if, within seven days from the date on which its production was required under sub rule (1), or as the case may be, from the date of occurrence of the accident, he produces the certificate at such police station as may have been specified by him to the police officer who required its production or, as the case may be, to the police officer at the site of the accident or to the officer-in-charge of the police station at which he reported the accident:  
Provided that except to such extent and with such modifications as may be prescribed, the provisions of this sub-section shall not apply to the Master of the "public service vessel or goods service vessel".
- 4) The owner of an Inland Vessel shall give such information as he may be required by or on behalf of a police officer empowered in this behalf by the State Government to give for the purpose of determining whether the Inland Vessel was or was not being manned in contravention of sub rule 7.4.2 and on any occasion when the Master of the Vessel was required under this section to produce his certificate of insurance.
- 5) In this section, the expression – produce his certificate of insurance means produce for examination the relevant certificate of insurance or such other evidence as may be prescribed that the Inland Vessel was not being manned in contravention of sub rule 7.4.2
- 6) As soon as any information regarding any accident involving death or bodily injury to any person is recorded or report under this section is completed by a police officer, the officer-in-charge of the police station shall forward a copy of the same within thirty days from the date of recording of information or, as the case may be, on completion of such report to the Claims Tribunal having jurisdiction and a copy thereof to the concerned insurer, and where a copy is made available to the owner, he shall also within thirty days of receipt of such report, forward the same to such Claims Tribunal and insurer.

**Objects and Reasons:-** Sub rule 7.4.14 makes it compulsory on the part of the Master of an Inland Vessel involved in accident, to produce the certificate of registration and insurance, the certificate of survey granted under section 9 of the Inland Vessels Act, 1917 and a certificate of registration granted under section 19F of the Inland Vessels Act 1917 and a certificate granted under Chapter III of the Inland Vessels Act 1917 without delay. It also provides that the police officer who makes a report of accident shall send a copy of the report to the Accident Claims Tribunal.

**7.4.15 Production of certificate of insurance on application for authority to use Inland Vessel:-**

A State Government may make rules requiring the owner of any Inland Vessel when applying whether by payment of a tax or otherwise for authority to use the Inland Vessel in an Inland Waterway to produce such evidence as may be prescribed by those rules to the effect that either:-

- a) On the date when the authority to use the Inland Vessel comes into operation there will be in force the necessary policy of insurance in relation to the use of the Inland Vessel by the applicant or by other persons on his order or with his permission, or
- b) The Inland Vessel is an Inland Vessel to which rule 7.4.2 does not apply.

**Objects and Reasons:-** Rule 7.4.15 empowers the State Government to make rules to require production of certificate of insurance of an Inland Vessel at the time of payment of taxes and to have a valid certificate of insurance before the Inland Vessel prior obtaining a certificate of registration granted under section 19F of the Inland Vessels Act, 1917.

**7.4.16 Duty to furnish particulars of Inland Vessel involved in accident:-**

A registering authority or the officer-in-charge of a police station shall, if so required by a person who alleges that he is entitled to claim compensation in respect of an accident arising out of the use of an Inland Vessel, or if so required by an insurer against whom a claim has been made in respect of any Inland Vessel, furnish to that person or to

**Production  
of certificate  
of insurance  
on  
application  
for  
authority to  
use inland  
vessel**

**Duty to  
furnish  
particulars  
of Inland**



that insurer, as the case may be, on payment of the prescribed fee any information at the disposal of the said authority or the said police officer relating to the identification mark send other particulars of the Inland Vessel and the name and address of the person who was using the Inland Vessel at the time of the accident or was injured by it and the property, if any, damaged in such form and within such time as the State / Central Government may prescribe.

**Vessels  
involved in  
accident**

**Objects and Reasons:-** Rule 7.4.16 lays down that it is the duty of the police officer registering accident case and the registering authority to furnish to the person who alleges that he is entitled to claim compensation all such particulars in such form and within such time as the State / Central Government may prescribe.

**7.4.17 Special provisions as to compensation in case of hit and run Inland Vessel accident:-**

- 1) For the purpose of this Rule, rule 7.4.18 and sub rule 7.4.19:-
  - a) "grievous hurt" shall have the same meaning as in the Indian Penal Code, 1860 (45 of 1860);
  - b) Hit and run Inland Vessel accident means an accident arising out of the use of a Inland Vessel the identity whereof cannot be ascertained in spite of reasonable efforts for the purpose;
  - c) Scheme means the scheme framed under rule 7.4.19
- 2) Notwithstanding anything contained in the General Insurance Business (Nationalization) Act, 1972 (57 of 1972) or any other law for the time being in force or any instrument having the force of law, the General Insurance Corporation of India formed under section 9 of the said Act and the insurance companies for the time being carrying on general insurance business in India shall provide for paying in accordance with the provisions of this Act and the scheme, compensation in respect of the death of, or grievous hurt to, persons resulting from hit and run Inland Vessel accidents.
- 3) Subject to the provisions of Motor Vehicles Act, 1988 and the scheme, there shall be paid as compensation:-

**Special  
provisions  
as to  
compen-  
sation in  
case of hit  
and run  
inland  
vessel  
accident**

- a. In respect of the death of any person resulting from a hit and run Inland Vessel accident, a fixed sum of fifty thousand rupees;
  - b. In respect of grievous hurt to any person resulting from a hit and run Inland Vessel accident, a fixed sum of twenty-five thousand rupees.
- 4) The provisions of sub-rule (1) of rule 7.5.2 shall apply for the purpose of making applications for compensation under this section as they apply for the purpose of making applications for compensation referred to in that sub-section.

**Objects and Reasons:-** Rule 7.4.17 provides for framing of a scheme by the Central Government for the payment of compensation in – hit and run cases. It also lays down the amount of compensation in respect of the death and also in respect of grievous hurt.

**7.4.18 Refund in certain cases of compensation paid under rule 7.4.17:-**

- 1) The payment of compensation in respect of the death of, or grievous hurt to, any person under rule 7.4.17 shall be subject to the condition that if any compensation (hereinafter in this sub-section referred to as the other compensation) or other amount in lieu of or by way of satisfaction of a claim for compensation is awarded or paid in respect of such death of grievous hurt under any other provision of this Act or any other law or otherwise so much of the other compensation or other amount aforesaid as is equal to the compensation paid under rule 7.4.17 shall be refunded to the insurer.
- 2) Before awarding compensation in respect of an accident involving the death of, or bodily injury to, any person arising out of the use of a Inland Vessel under any provision of Motor Vehicles Act, 1988 (other than rule 7.4.17 1 above) or any other law, the Tribunal Court or other authority awarding such compensation shall verify as to whether in respect of such death or bodily injury compensation has already been paid under rule 7.4.17 or an application for payment of compensation is pending under that section, and such Tribunal, Court or other authority shall:-

**Refund in  
certain  
cases of  
compensat-  
ion paid  
under rule  
7.4.17**

- a) If compensation has already been paid under rule 7.4.17, direct the person liable to pay the compensation awarded by it to refund to the insurer, so much thereof as is required to be refunded in accordance with the provisions of sub-rule (1);
- b) If an application for payment of compensation is pending under rule 7.4.17 forward the particulars as to the compensation awarded by it to the insurer.

**Explanation:-** For the purpose of this sub-section, an application for compensation under rule 7.4.17 shall be deemed to be pending:-

- i. If such application has been rejected, till the date of the rejection of the application, and
- ii. In any other case, till the date of payment of compensation in pursuance of the application.

**Objects and Reasons:-** Rule 7.4.18 seeks to provide that when compensation is awarded in a case where compensation under rule 7.4.17 has already been paid then so much of the compensation paid as per rule 7.4.17 shall be refunded to the insurer.

**7.4.19 Scheme for payment of compensation in case of hit and run Inland Vessel accidents:-**

- 1) The Central Government may, by notification in the Official Gazette, make a scheme specifying, the manner in which the scheme shall be administered by the General Insurance Corporation, the form, manner and the time within which applications for compensation may be made, the officers or authorities to whom such applications may be made, the procedure to be followed by such officers or authorities for considering and passing orders on such applications, and all other matters connected with, or incidental to, the Administration of the scheme and the payment of compensation.
- 2) A scheme made under sub-rule (1) may provide that:-
  - a) A contravention of any provision thereof shall be punishable with imprisonment for such term as may be specified but in no case exceeding three months, or with fine which may extend to such amount as may be specified but in no case exceeding five hundred rupees or with both;

**Scheme for  
payment of  
compensa-  
tion in case  
of hit and  
run inland  
vessel  
accidents**

- b) The powers, functions or duties conferred or imposed on any officer or authority by such scheme may be delegated with the prior approval in writing of the Central Government, by such officer or authority to any other officer or authority;

**Objects and Reasons:-** Rule 7.4.19 empowers the Central Government to make scheme for payment of compensation in – hit and run accident cases detailing the procedure for making claim, the authorities to whom the claim should be made, etc.

**7.4.19 (A) Option to file claim in certain cases.**

Where a person is entitled to claims compensation under sub-rule 7.3.1 he shall file the claim under either of the said sub-rule 7.3.1.

**Option to  
file claim  
in certain  
cases**

**7.5 Claims Tribunals:-**

**7.5.1. Procedure and powers of Claims Tribunals:-**

- 1) In holding any inquiry, the Claims Tribunal may, subject to any rules that may be made in this behalf, follow such summary procedures as it thinks fit.
- 2) The Claims Tribunal shall have all the powers of a Civil Court for the purpose of taking evidence on oath and of enforcing the attendance of witnesses and of compelling the discovery and production of documents and material objects and for such other purposes as may be prescribed; and the Claims Tribunal shall be deemed to be a Civil Court for all the purposes of section 195 and Chapter XXVI of the Code of Criminal Procedure, 1973.
- 3) Subject to any rules that may be made in this behalf, the Claims Tribunal may, for the purpose of adjudicating upon any claims for compensation, choose one or more persons possessing special knowledge of any matter relevant to the inquiry to assist it in holding the inquiry.

**Procedure  
and powers  
of claim  
tribunal**

**Objects and Reasons:-** Rule 7.5.1 lays down the procedure to be followed by the Claims Tribunal in setting claims compensation and the powers of the Claims Tribunal.

**7.5.2 Impleading insurer in certain cases:-**

Where in the course of any inquiry, the Claims Tribunal is satisfied that:-

- a) There is collusion between the person making the claim and the person against whom the claim is made, or
- b) The persons against whom the claim is made has failed to contest the claim, it may, for reasons to be recorded in writing, direct that the insurer who may be liable in respect of such claim, shall be impleaded as a part to the proceeding and the insurer so impleaded shall thereupon have, without prejudice to the provisions contained in sub-rule (2) of rule 7.4.5, the right to contest the claim on all or any of the grounds that are available to the person against whom the claim has been made.

**Impleading  
insurer in  
certain  
cases**

**7.5.3 Award of interest where any claim is allowed:-**

Where any Claims Tribunal allows a claim for compensation made under Motor Vehicles Act, 1988, such Tribunal may direct that in addition to the amount of compensations impel interest shall also be paid at such rate and from such date not earlier than the date of making the claim as it may specify in this behalf.

**Award of  
interest  
where any  
claim is  
allowed**

**Objects and Reasons:-** Rule 7.5.2 empowers the Claims Tribunal to order that simple interest at such rates as it thinks fit shall also be paid along with the award of compensation.

**7.5.4 Award of compensatory costs in certain cases:-**

- 1) Any Claims Tribunal adjudicating upon any claim for compensation under Motor Vehicles Act, 1988, may in any case where it is satisfied for reasons to be recorded by it in writing that:-

- a) The policy of insurance is void on the ground that it was obtained by representation of fact which was false in any material particular, or
- b) Any party or insurer has put forward a false or vexatious claim or defense such Tribunal may make an order for the payment, by the party who is guilty of misrepresentation or by whom such claim

**Award of  
compensa-  
tory costs in  
certain  
cases**

or defense has been put forward of special costs by way of compensation to the insurer or, as the case may be, to the party against whom such claim or defense has been put forward.

- 2) No Claims Tribunal Shall pass an order for special costs under sub-rule (1) for any amount exceeding one thousand rupees.
- 3) No person or insurer against whom an order has been made under this section shall, by reason thereof be exempted from any criminal liability in respect of such misrepresentation, claim or defense as its referred to in sub-rule (1).
- 4) Any amount awarded by way of compensation under this section in respect of any misrepresentation, claim or defense, shall be taken into account in any subsequent suit for damages for compensation in respect of such misrepresentation, claim or defense.

**Objects and Reasons:-** Rule 7.5.3 seeks to empower the Claims Tribunals to award special compensatory costs where in certain cases it is found that there has been misrepresentation of case or vexatious to claims or defense.

#### **7.5.5 Appeals:-**

- 1) Subject to the provisions of sub-rule (2) of section 19P of the Act, any person aggrieved by an award of a Claims Tribunal may, within ninety days from the date of the award, prefer an appeal to the High Court:-  
Provided that no appeal by the person who is required to pay any amount in terms of such award shall be entertained by the High Court, unless she has deposited with it twenty-five thousand rupees or fifty percent, of the amount so awarded, whichever is less, in the manner directed by the High Court:  
Provided further that the High Court may entertain the appeal after the expiry of the said period of ninety days, if it is satisfied that the appellant was prevented by sufficient cause from preferring the appeal in time.
- 2) No appeal shall lie against any award of a Claims Tribunal if the amount in dispute in the appeal is less than ten thousand rupees.

#### **Appeals**

**Objects and Reasons:-** Rule 7.5.4 makes provision for appeal to High Court by the aggrieved against the order of Claim Tribunal and where the person aggrieved is the person who has to pay the compensation such person shall deposit 50 percent of the amount awarded as directed by the High Court.

**7.5.6 Recovery of money from insurer as arrear of land revenue:-**

Where any amount is due from any person under an award, the Claim Tribunal may, on an application made to it by the person entitled to the amount, issue a certificate for the amount to the Collector and the Collector shall proceed to recover the same in the same manner as an arrear of land revenue.

**Recovery of  
money from  
insurer as  
arrear of  
land  
revenue**

**Objects and Reasons:-** Rule 7.5.5 lays down that any money due from any person under an award by the Claim Tribunal may be recovered by the Collector as arrears of land revenue.

**7.5.7 Bar on jurisdiction of Civil Courts:-**

Where any Claims Tribunal has been constituted for any area, no Civil Court shall have jurisdiction to entertain any question relating to any claim for compensation which may be adjudicated upon by the Claim Tribunal for that area, and no injunction in respect of any action taken or to be taken by or before the Claims Tribunal in respect of the claim for compensation shall be granted by the Civil Court.

**Bar on  
jurisdiction  
of civil  
courts**

**Objects and Reasons:-** Rule 7.4.6 bars the jurisdiction of Civil Courts where any Claims Tribunal has been constituted.

**CHAPTER - VIII****REMOVAL OF OBSTRUCITON AND SIMILAR HAZARDS IN NAVIGATION****8.1 Raising of or removal of wreck impeding navigation etc:-****Raising /  
Removal of  
Wreck  
impeding  
Navigation**

- 8.1.1 If any mechanically propelled vessel or other vessel is wrecked, stranded or sunk in any inland water is or is likely to become obstruction, impediment or danger to the safe and convenient navigation or use of the inland water or the landing place or embankment or part thereof, any officer empowered by the State Government by notification in the Official Gazette in this behalf (hereinafter in the Chapter referred to as competent officer) shall cause the vessel to be raised, removed, blown up or otherwise destroyed as the circumstances may warrant.
- 8.1.2 If any property recovered by a competent officer acting under sub-rule 8.1.1 is unclaimed or the person claiming it fails to pay reasonable expenses incurred by the competent officer under that sub-section and a further sum of twenty-five percent, of the amount of such expense, the competent officer may sell the property by public auction, if the property is of a perishable nature, forthwith, and it is not o f a perishable nature, at any time not less than two months after the recovery thereof.
- 8.1.3 The expense and further sum aforesaid shall be payable to the competent officer out of the sale proceeds of the property and the balance shall be paid to the person entitled to the property recovered, or if no such person appears and claims the balance, shall be held in deposit for payment, without interest, to the person thereafter establishing his right thereto;
- Provided that the person makes his claim within three years from the date of sale.
- 8.1.4 Where the sale proceeds of the property are not sufficient to meet the expenses and further sum aforesaid, the owner of the vessel at the time the vessel was wrecked, stranded or sunk shall be liable to pay the deficiency to the competent officer on demand, and if the deficiency be



not paid within the one month of such demand, the competent officer may recover the deficiency from such owner as if it were an arrear of land revenue.

## **8.2 Removal of obstruction in inland water:-**

- 8.2.1 The competent officer may remove, or cause to be removed any timber, raft or other thing, floating or being in any part of the inland water, which in his opinion, obstructs or impedes the free navigation thereof or the lawful use of any landing place or embankment or part thereof.
- 8.2.2 The owner of any such timber, raft or other thing shall be liable to pay the reasonable expenses of the removal thereof, and if such owner or any other person has without lawful excuse caused any such obstruction or impediment, or causes any public nuisance affecting or likely to affect such free navigation of Lawful use, he shall also be punishable with fine which may extend to one rupees.
- 8.2.3 The Competent Officer or any magistrate having jurisdiction over the offences may cause any such nuisance to be abated.

### **Removal of Obstruction in Inland Water**

## **8.3 Recovery of expenses of removal:-**

If the owner of any such timber, raft or other thing, or the person who has caused any such obstruction, impediment or public nuisance, neglects to pay the reasonable expenses incurred in the removal thereof, within one week after demand or within fourteen days after such removal has been notified in the Official Gazette or in such other manner as the State Government may, by general or special order direct, the competent officer may cause such timber, raft or other thing or the materials of any public nuisance so removed, or so much thereof as may be necessary, to be sold by public auction and may retain all the expenses of such removal and sale out of the proceeds of the sale, and shall pay the surplus of such proceeds or deliver so much of the thing or materials so may remain unsold, to the person entitled to receive the same and if no such person appears, shall cause the same to be kept and deposited in such manner as the State Government directs, and may, if necessary, from time to time, realize the expenses of keeping the same, together with the expenses of sale, or further sale of so much of the thing or materials as may remain unsold.

### **Recovery of Expenses of Removal**

**8.4 Removal of lawful obstruction:-**

- 8.4.1 If any obstruction or impediment to the navigation of any inland water has been lawfully made or has become lawful by reason of the long continuance of such obstruction or impediment or otherwise, the competent Officer shall report the same for the information of the State Government and shall, with the sanction of the State Government, cause the same to be removed or altered, making reasonable compensation to the person suffering damage by such removal or alternation.
- 8.4.2 Any dispute arising out of or concerning such compensation shall be determined according to the law relating to like disputes in the case of land required for public purpose.

**Removal of  
Lawful  
Obstruction****8.5 Fouling of Government moorings:-**

- 8.5.1 If any mechanically propelled vessel hooks or gets fouled in any of the or moorings laid down by or by the authority of the State Government in any part of inland water, the master of such vessel shall not, nor shall any other person, except in the case of emergency, lift the buoy or mooring for the purpose of unhooking or getting clear from the same without the assistance of the competent officer.
- 8.5.2 The Competent Officer immediately on receiving information of such accident shall assist and superintend the clearing of such vessel and the master of the vessel shall, on demand, pay such reasonable expenses as may be incurred in clearing the same.
- 8.5.3 Any master or other person offending against the provisions of the section shall, for every offence, be punishable with fine which may extend to one hundred rupees.

**Fouling of  
Govern-  
ment  
Moorings**

# **ANNEXURE – 1**

## **SCHEDULES**

# **Schedule - I**

## **CONSTRUCTION RULES**

### **FOR INLAND VESSELS**

**Construction and other related Rules of IRS and / or any IACS Classification Society  
and / or IWAI model rules as applicable may be accepted for Inland Vessels**

**PART A**  
**GENERAL HULL**  
**REQUIREMENTS**

**Chapter 1**  
**General, Definitions, Documentation**  
**Contents**

**Section**

- 1 General
- 2 Definitions
- 3 Documentation

**Section 1**

**General**

**1.1 Scope**

- 1.1.1 The Rules in this part apply to all-welded, single hull steel vessels of normal form proportions and speed for operation in inland waterways.
- 1.1.2 For additional class notions relating to various vessel types, requirements as per Pt. 5 are to be complied with.
- 1.1.3 Vessels of unconventional forms and proportions or intended for carriage of cargoes not covered by the Rules or to be engaged in special service will receive individual consideration based on the general principles of the rules. In these cases, however additional calculations and / or model testing may be required to be carried out and submitted for approval
- 1.1.4 Proposals for use of alternative materials e.g. aluminum, wood, etc. for some parts of the vessel shall receive special consideration.

**1.2 Equivalence**

- 1.2.1 Alternative arrangements, scantlings and equipment may be accepted provided they can be shown to be equivalent to the overall safety and strength standard of the Rules. Direct calculations for the derivation of the scantlings as an alternative to those derived by the Rule formulae, may be accepted on special consideration. The calculation procedure and the assumptions made are to be submitted for approval.

**1.3 National Rules**

- 1.3.1 While the Rules cover requirements for the classification of vessels, the attention of all concerned is drawn to requirements of various local or national Rules, Codes and Recommendations which the vessel may also have to comply with.

**1.4 Load line and stability**

- 1.4.1 All vessels will be assigned class only after it has been demonstrated that their intact / damage stability and load line requirements (where applicable) are in compliance with the standards laid down by the local or National Statutory Authority

**1.5 Assumptions**

- 1.5.1 It is assumed that significant dynamic excitation of major orders from propellers and machinery do not fall close to any natural frequency of the hull.
- 1.5.2 It is assumed that the vessels will be competently handled and loaded as per the approved loading manual

**Section 2****Definitions****2.1 Principal particulars**

- 2.1.1 The forward perpendicular, F. P., is the perpendicular drawn at the intersection of the maximum load waterline with the fore side of the stern.

In vessels with unusual bow arrangement the position of the F. P. will be specially considered.

- 2.1.2 The after perpendicular, A. P., is the perpendicular drawn at the intersection of the maximum load waterline with the after side of the rudder post or the centerline of the rudder stock if there is no rudderpost.

In vessels with unusual stern arrangement the position of the A. P. will be specially considered.

- 2.1.3 Rule length, L, is the distance, (m), between the forward and after perpendiculars. However L is to be not less than 96 percent, and need not be greater than 97 percent of the extreme length on the maximum load waterline.

In vessels with unusual bow and / or stern arrangement the Rule length, L, will be specially considered.

- 2.1.4 "Amidships" is at 0.5L of the F. P.

- 2.1.5 Breadth, B, is the greatest moulded breadth (m).

- 2.1.6 Depth, D, is the moulded depth (m), measured amidships from top to the keel to the moulded deck line of the uppermost continuous deck at side. When an uppermost continuous deck at side. When a rounded gunwale is arranged the depth is to be measured to the continuation of the moduled deckline.

2.1.7 Draught, T, is the moduled draught amidships corresponding to the maximum load waterline, (m).

2.1.8 The block co-efficient,  $C_b$ , is the moulded block co-efficient calculated as follows:-

$$C_b = \frac{\text{moulded displacement (m}^3\text{) at draught T}}{LBT}$$

2.1.9 Speed, V, is the maximum service speed in knots on draught T.

## 2.2 Structural Terms

2.2.1 The general terms used in the Rules for various structural parts of the vessels are defined as under:-

- *Strength Deck*:- In general the uppermost continuous deck. Where a superstructure deck has within 0.4L amidships, a continuous length equal to or greater than  $(1.5 B + 3H)$ , it is to be regarded as the strength deck instead of the covered part of the uppermost continuous deck. (H is the height of the superstructure, (m))
- *Superstructure*:- A decked structure on freeboard deck extending from side to side of the vessel or with the side plating not inboard of shell plating by more than 4 percent of the breadth B.
- *Deckhouse*:- A decked structure above the freeboard deck with the side plating being inboard of the shell plating by more than 4 percent of the breadth B.
- *Bottom Structure*:- Shell plating with stiffeners and girders below the upper turn of bilge and all other elements below and including the inner bottom plating in case of the double bottom. Sloping hopper tank top is to be regarded as a bulkhead.
- *Side Structure*:- Shell plating with stiffeners and girders between the upper turn of bilge and the uppermost continuous deck at side. A rounded gunwale is included in the side structure.
- *Deck Structure*:- Deck plating with stiffeners, girders, and supporting pillars.
- *Girder*:- A collective term for the primary supporting members, other terms include:-
  - Transverses – transverse girders under the deck.
  - Web frames – side vertical girders.
  - Hatch end beams – transverse deck girders at the ends of the hatch.
  - Stringers – horizontal girders.
  - Cross-ties – girders connecting two vertical girders in a deep tank.
  - Floor – bottom transverse girders.
- *Stiffener*:- A collective term for secondary supporting members; other terms being:-
  - Frames.



- Bottom, inner bottom, side or deck longitudinal.
- Reverse frame – transverse stiffener on the inner bottom.
- Horizontal or vertical bulkhead stiffeners.
- Other terms are defined in the appropriate Chapters.

### **2.3 Material factor**

- 2.3.1 Material factors,  $k$ , a factor depending on material strength is defined in Ch. 2

## **Section 3**

### **Documentation**

#### **3.1 General**

- 3.1.1 Documentation is to be submitted as per the following paragraphs. In case of certain vessel type's additional documentation may be required as per Pt. 5
- 3.1.2 The documents should be submitted in triplicate, one copy of which shall be returned.

#### **3.2 Plans for information**

- 3.2.1 The following supporting plans and calculations are to be submitted for information:-
- General arrangement
  - Tank plan
  - Capacity plan
  - Lines plan and Hydrostatic curves or tables
  - Docking plan

#### **3.3 Additional information**

- 3.3.1 The following additional information is to be submitted as necessary for strength calculations:-
- Maximum values of still water bending moments and shear forces.
  - Light vessel weight and its longitudinal distribution
  - Bon jean data.
  - Stowage factor and angle of repose of bulk cargoes to be carried.
  - Masses and unbalanced moments of heavy machinery components e.g. engines, cranes, winches etc.

#### **3.4 Plans for approval**

- 3.4.1 Plans as relevant are to be submitted for approval as indicated in Table 3.4.1. These should as far as practicable be complete in all necessary details.

### 3.5 Plans to be kept on board

- 3.5.1 A copy of the final approved loading manual and suitable scantling plans including details of corrosion control system; if any, are to be placed on board the vessel.
- 3.5.2 To facilitate the ordering of materials for repairs, plans showing the disposition and extent of high tensile steel and steel of grades other than Grade A, along with the information relating to their physical and mechanical properties, recommended working, treatment and welding procedures etc. are to be placed on board.

**Table 3.4.1 : Plans for approval**

| <b>Plan</b>  | <b>Including information on</b>   |
|--|---|
| Loading manual   | Details of loading in all contemplated loading conditions and resulting SWBM, SF & Torsional Moments (TM)<br>Design values of SWBM, SF & TM   |
| Mid-ship section<br>Other transverse sections<br>Longitudinal sections & decks<br>Shell expansion & framing plan | Main particulars (L, B, D, T, C <sub>b</sub> , V)<br>Equipment specification<br>Complete class notation applied for<br>Spacing of stiffeners<br>Deck loads, if other than those specified in the Rule<br>Opening on the deck<br>Opening on the shell<br>Material grades |
| Double bottom  | Indication of access<br>Height and location of overflows<br>Loading on Inner bottom   |
| Water light sub-division bulk heads & Water tight tunnels  | Openings and their closing appliances   |
| Aft-end structure  | Propeller outline   |
| Stern frame or stern post<br>Propeller shaft brackets<br>Aft peak tank   | Propeller thrust<br>Structural details in way of rudder and propeller bearings<br>Height and location of overflows  |
| Engine room structure<br>Engine and thrust block seating   | Type, power and r. p. m. of propulsion machinery<br>Weight of machinery, boilers, etc.  |
| For-end construction<br>Fore peak tank   | Openings on non-water tight bulkheads and diaphragm plates<br>Height and location of overflows  |

|   |  |
|---|--|
| Oil tight / water tight and partition bulkheads in cargo tanks, ballast tanks and deep tanks                      | Intended tank contents & their densities<br>Height and location of overflow / air pipes<br>Tanks intended to be partially filled<br>Corrosion protection: if any |
| Superstructures, deckhouses and machinery casings   | Height of sills from deck and closing appliances for companion ways  |
| Hatchways<br>Hatch covers   | Position and type<br>Loads if different from those specified in the rules<br>Sealing and securing arrangement, spacing of bolts or wedges                        |
| Rudder, stock and tiller<br>Steering gear arrangement   | Speed of the vessel (ahead & astern)<br>Material of bearing, coupling bolts, stock and the locking device<br>Rudder carrier                                      |
| Mast & derrick posts<br>Support structure for masts, derrick posts & cranes                                       | Derrick length and loading<br>Dimensions and positions of stays and shrouds<br>Quality of material   |
| Testing plan of tanks & bulkheads   |  |
| Welding details   |  |
| Notes:-<br>1) See Chapter 5, Section 6.<br>2) One drawing may contain more than one of the items from each group. |  |

**End of the Chapter**

**Chapter 2**  
**Materials of Construction**  
**Contents**

**Section**

- 1 General
- 2 Corrosion Protection
- 3 Deck

**Section 1**

**General**

**1.1 Scope**

- 1.1.1 The Rules relate, in general, to the construction of steel Vessels, Consideration will however be given to the use of other materials also.
- 1.1.2 The materials used in the construction of the vessel are to be manufactured and tested in accordance with the requirement of Pt. 2. 'Materials' of the Rules and Rules for the Construction and Classification of Steel Vessels (Main Rules). Materials for which provision is not made may be accepted, provided that they comply with an approved specification and such tests as may be considered necessary.

**1.2 Steel**

- 1.2.1 Ordinary hull structural steel is a hull structural steel with a minimum yield stress of 235 (N/mm<sup>2</sup>) and a tensile strength generally in the range of 400-490 (N/mm<sup>2</sup>).  
For ordinary hull structural steel the material factor 'k' is to be taken as 1.0.
- 1.2.2 Steels having a yield stress of 265 (N/mm<sup>2</sup>) and higher, are regarded as higher tensile steels. Where higher tensile steel is used, the hull girder section modulus and the local scantlings may be reduced in accordance with the relevant requirements of the Rules.  
For this purpose, a material factor 'K', is to be taken as follows:-  
K = 0.78 for steel with a minimum yield stress of 315 (N/mm<sup>2</sup>)  
K = 0.72 for steel with minimum yield stress of 355 (N/mm<sup>2</sup>)
- 1.2.3 Where steel castings or forgings are used for stern frames, rudder frames, rudder stocks, propeller shaft brackets and other major structural items, they are to comply with Pt. 2 'Materials' of Main Rules as appropriate.

### 1.3 Grades of steel

- 1.3.1 The vessels covered by these Rules are generally to be constructed in Grade 'A' steel. However, for materials of over 20 (mm) in thickness used in highly stressed areas, grades of steel with higher levels of notch toughness (Grades 'B', 'D' or 'E') may be required dependent on the stress pattern associated with its location.

### 1.4 Aluminum

- 1.4.1 Where seawater resisting aluminum alloys manufactured and tested in accordance with the requirements of Pt. 2 of the main rules are used for superstructures, deckhouses, hatch covers or other structural components, scantlings equivalent to steel are to be derived as follows:-

Plating Thickness,  $t_a - t_s \sqrt{K_a}$

Section modulus of stiffeners,  $Z_a - Z_s.k_a$  where

$t_a, t_s$  = plating thickness of aluminum and mild steel respectively,

$Z_a, Z_s$  = section modulus of aluminum and mild steel stiffeners respectively.

$K_a = \frac{235}{a}$

a

$a_a = 0.2\%$  proof stress or 70% of the ultimate strength of the aluminum material, whichever is lesser ( $N/mm^2$ ).

- 1.4.2 The smaller modulus of elasticity of aluminum is to be taken into account, when determining the buckling strength of structural elements subjected to compression and the deflections, where relevant.

## Section 2

### Corrosion Protection

#### 2.1 General

- 2.1.1 All steel work, except inside tanks intended for the carriage of oil or bitumen, is to be protected against corrosion by application of suitable coating.

For protection required in salt water ballast spaces, See 2.5

For protection required in holds of dry bulk cargo carriers, see Pt. 5., Ch. 1.

For the protection required in tanks carrying chemicals or other special cargoes, see Pt. 5, Ch.3

- 2.1.2 Where bimetallic connections are made, measures are to be incorporated to preclude galvanic corrosion.

**2.2 Surface preparation, prefabrication primers, and paints or coatings**

- 2.2.1 Steelwork is to be cleared of mill scale and suitably cleaned before the application of surface paints and coatings. It is recommended that blast cleaning or other equally effective means be employed for this purpose.
- 2.2.2 Where a primer is used to coat steel after surface preparation and prior to fabrication, the composition of the coating is to be such that it will have no significant deleterious effect on subsequent welding work and that it is compatible with the paints or other coatings subsequently applied. Unless the primer used is type approved by IRS for this purpose, tests as detailed in Pt. 3, Ch. 2, Sec. 3 of the Main Rules are to be made to determine the influence of the primer coating on the characteristics of the weld.
- 2.2.3 Paints other coatings are to be suitable for the intended purpose in the locations where they are to be used. Unless previously agreed, to least two coats are to be applied.
- 2.2.4 The paints or coating is to be compatible with any previously applied primer, See 2.2.2.
- 2.2.5 Paints, varnishes and similar preparations having a nitrocellulose or other highly flammable base, are not to be used in accommodation or machinery spaces.
- 2.2.6 In vessels intended for the carriage of oil cargoes having a flash point below 60° C (Closed cup test), paint containing aluminum should not in general be used in cargo tanks, adjacent ballast tanks, cofferdams, pump rooms as well as on deck above the mentioned spaces, not in any other areas where cargo vapors may accumulate, unless it has been shown by appropriate tests that the paint to be used does not increase the incendive sparking hazard.

**2.3 Internal cathodic protection**

- 2.3.1 Impressed current cathodic protection systems are not permitted in any tank.
- When a cathodic protection system is to be fitted in tanks for the carriage of liquid cargo with flash point not exceeding 60° C, a plan showing details of the locations and attachment of anodes is to be submitted. The arrangements will be considered for safety against fire and explosion aspects only.
- 2.3.2 Particular attention is to be given to the locations of anodes in relation to the structural arrangements and openings of the tank.
- 2.3.3 Anodes are to be of approved design and sufficiently rigid to avoid resonance in the anode support. Weldable steel cores are to be fitted, and these are to be so designed as to retain the anode even when the anode is wasted.

- 2.3.4 Anodes are to be attached to the structure in such a way that they remain secure both initially and during service. The following methods of attachment would be acceptable:-
- a) Steel core connected to the structure by continuous welding of adequate section.
  - b) Steel core bolted to separate supports, provided that a minimum of two bolts with lock nuts are used at each support. The separate supports are to be connected to the structure by continuous welding of adequate section.
  - c) Approved means of mechanical clamping.
- 2.3.5 Anodes are to be attached to stiffeners, or may be aligned in way of stiffeners on plane bulkhead plating, but they are not to be attached to the shell. The two ends are not to be attached to separate members which are capable of relative movement.
- 2.3.6 Where cores or supports are welded to the main structure, they are to be kept clear of the toes of brackets and similar stress raisers. Where they are welded to asymmetrical stiffeners, they are to be connected to the web with the welding kept at least 25 (mm) away from the edge of the web. In the case of stiffeners or girders with symmetrical face plates, the connection may be made to the web or to the centerline of the face plate but well clear of the free edges. However, it is recommended that anodes are not fitted to the face plates of high tensile steel longitudinal.

## **2.4 Aluminum and magnesium anodes**

- 2.4.1 Aluminum and aluminum alloy anodes are permitted in tanks used for the carriage of oil, but only at locations where the potential energy does not exceed 275 (J) (i.e. 28 (kgf m)). The weight of the anode is to be taken as the weight at the time of fitting, including any inserts and fitting devices.
- 2.4.2 The height of the anode is, in general, to be measured from the bottom of the tank to the center of the anode. Where the anode is located on or closely above a horizontal surface (such as a bulkhead girder) not less than 1 (m) wide, provided with an upstanding flange or face plate projecting not less than 75 (mm) above the horizontal surface, the height of the anode may be measured above that surface.
- 2.4.3 Aluminum anodes are not to be located under tank hatches or tank cleaning openings unless protected by adjacent structure.
- 2.4.4 Magnesium or magnesium alloy anodes are permitted only in tanks intended solely for water ballast.

**2.5 Corrosion protection coatings for salt water ballast spaces**

- 2.5.1 In case of vessels which normally carry salt water for ballast purposes, all ballast spaces, having boundaries formed by the hull envelope, are to have a suitable corrosion protection coating applied in accordance with the manufacture's requirements.

**Section 3****Deck Covering****3.1 General**

- 3.1.1 Where plated decks are sheathed with wood or an approved composition, reductions in plate thickness may be allowed.
- 3.1.2 The steel deck is to be coated with a suitable material in order to prevent corrosive action, and the sheathing or composition is to be effectively secured to the deck.
- 3.1.3 Deck coverings in the following positions are to be of a type which will not readily ignite where used on decks:-
- a) Forming the crown of machinery or cargo spaces with accommodation spaces of cargo vessels
  - b) Within accommodation spaces, control stations, stairways and corridors of passenger vessels.

**End of Chapter**



**Chapter 3**  
**Principles for Scantlings and Structural Details**  
**Contents**

**Section**

1. General
2. Corrosion Additions
3. Plating
4. Stiffeners and Girders
5. End Attachments
6. Buckling

**Section 1**

**General**

**1.1 Application**

- 1.1.1 Scantlings of various platings, stiffeners and girders to meet the local strength requirements are to be determined in accordance with the general principles given in this Chapter.

The design values of loads are given in chapters relevant to the structures under consideration.

- 1.1.2 Scantlings of hull members contributing to the longitudinal strength are also to comply with the requirements of Ch. 4.
- 1.1.3 Scantlings of hull members subjected to compressive stresses are also to comply with the requirements of Sec. 6.

**1.2 Symbols**

P = design pressure ( $\text{kN/m}^2$ ) as given in the relevant chapters calculated at the load point as given below:-

Load point for plates:-

- Midpoint of horizontally stiffened plate field
- Half the stiffener spacing above the lower support of vertically stiffened plate field, or at the lower edge of plate when the thickness is changed within the plate field.

Load point for stiffeners:-

- Midpoint of span.

Load point for girders:-

- Midpoint of load are supported by the girder.

$s$  = stiffeners spacing, (mm), measured along the plating.

$l$  = span of the stiffener, (m), in accordance with 4.1.1.

$r$  = radius of curvature (mm).

$S$  = span of the girder (m), in accordance with 4.1.2.

$b$  = mean breadth (m), of the load area supported by the girder.

$h_w$  = height of web, (mm).

$b_f$  = width of flange, (mm).

$a$  = allowable bending stress, (N/mm<sup>2</sup>) as given in the relevant chapters.

$a_y$  = minimum yield of stress of material, (N/mm<sup>2</sup>) may be taken as 235 (N/mm<sup>2</sup>) for normal strength steel.

$k$  = material factor as defined in Ch. 2, Sec. 1.2.

$E$  = modulus of elasticity,  $2.06 \times 10^5$  (N/mm<sup>2</sup>) for steel.

### 1.3 Frame spacing

- 1.3.1 The normal frame spacing between aft peak and 0.2 L from FP may be taken as:-

450 + 2L (mm) for transverse framing

550 + 2L (mm) for longitudinal framing.

- 1.3.2 In aft peak and fore peak the frame spacing is not to exceed 600 (mm) or that given in 1.3.1 whichever is less.

- 1.3.3 Where the actual frame spacing is higher than that mentioned above, the minimum thickness of various structural members are given in the Rules may require to be increased.

## Section 2

### Corrosion Additions

#### 2.1 General

- 2.1.1 The thickness of plates, stiffeners and girders in tanks for water ballast and / or cargo oil and in holds of dry bulk cargo carriers is to be increased by a corrosion addition ' $t_c$ ' as given in Table. 2.1.1

- 2.1.2 The required corrosion addition ' $Z_c$ ' to the section modulus of stiffeners and girders due to the thickness addition ' $t_c$ ' mentioned above may be approximated as:-

$$Z_c = \frac{t_c h_w (b_f + 0.3 h_w)}{1000} \text{ (cm}^3\text{)}$$

| Table 2.1.1 : Corrosion addition $t_c$ (mm)   |   |                   |
|---|---|-------------------|
| Item  | Space Category  | $t_c$             |
| Internal members within and plate boundary between spaces of the given category   | Ballast tank  | 1.5 <sup>1)</sup> |
|   | Cargo oil tank  | 1.5               |
|   | Hold of dry bulk cargo carriers                             | 2                 |
|   | Ballast tank / Cargo oil tank                               | 1.5 <sup>1)</sup> |
| Plate boundary between the two Given space categories   | Ballast tank / Hold of dry bulk Cargo carrier               | 2                 |
|   | Ballast tank / Other category space                         | 1.0               |
|   | Cargo Oil Tank / Other Category Space                       | 1.0               |
|   | Hold of dry bulk cargo cargo Carrier / Other category space | 1.0               |
| Notes:-   |   |                   |
| <p>1) Where the relevant ballast or liquid cargo tanks extend upon the exposed weather deck the minimum corrosion addition in the region extended up to 1.5 (m) below the weather deck corrosion addition is to be increased by 0.5 (mm).</p> <p>2) Hold of dry bulk cargo carriers refers to the cargo holds of vessels with class notation <b>Bulk Carrier</b> and <b>Ore Carrier</b>.</p> <p>3) Other category space denotes the hull exterior and all spaces other than water ballast and cargo oil tanks and holds of dry bulk cargo carriers.</p> |   |                   |

### Section 3

#### Plating

#### 3.1 General

3.1.1 Minimum requirements of thickness of various platings are given in relevant chapters.

3.1.2 The thickness 't' of plating subjected to lateral pressure is not to be less than

$$t = \frac{15.8 \sqrt{p}}{\sqrt{a}} \times 10^{-3} + t_c (\text{mm})$$

- 3.1.3 Any tapering of thickness of plating's contributing to the longitudinal strength is to be based upon linear variation of stress  $s$  allowed at specific regions.

## Section 4

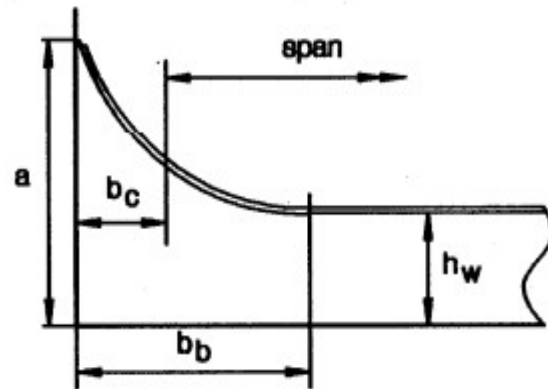
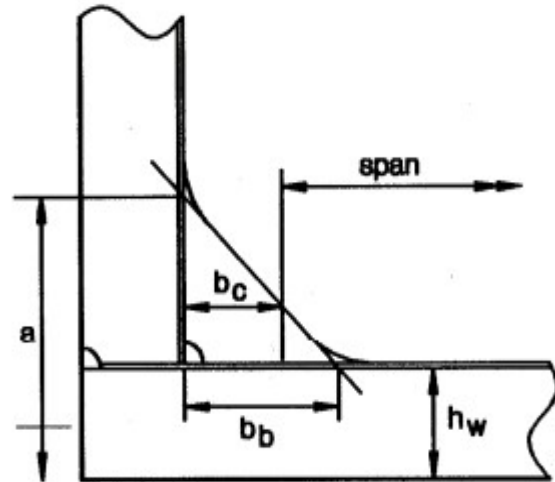
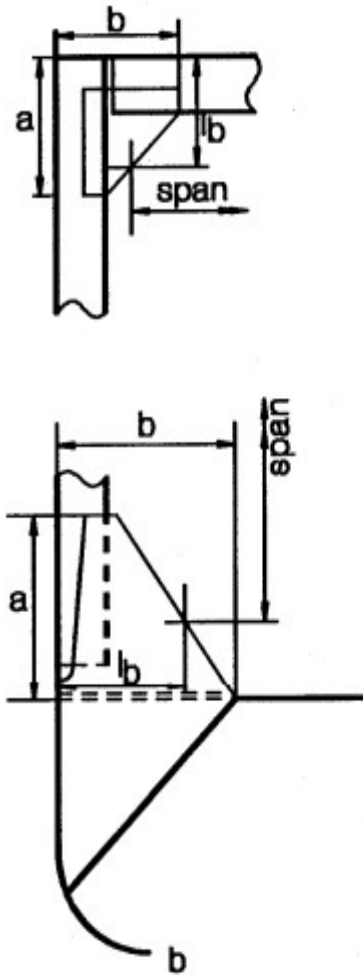
### Stiffeners and Girders

#### 4.1 Determination of span

- 4.1.1 For stiffeners, the span ' $l$ ' x  $m+$  is to be taken as the length of the stiffener between the two supporting members less the depth of stiffener on crossing panel if any. Where brackets larger than those required in 5.1.2 are fitted, the span may be determined as shown in Fig. 4.1.1.

For curved stiffeners, ' $l$ ' may be based on the chord length.

- 4.1.2 For girders, the span ' $S$ ' \*  $m+$  is to be taken as the length of the girder between the two supporting members less the web height of in-plane girder if any, and the correction for bracket ' $b_c$ ', as shown in Fig. 4.1.2.



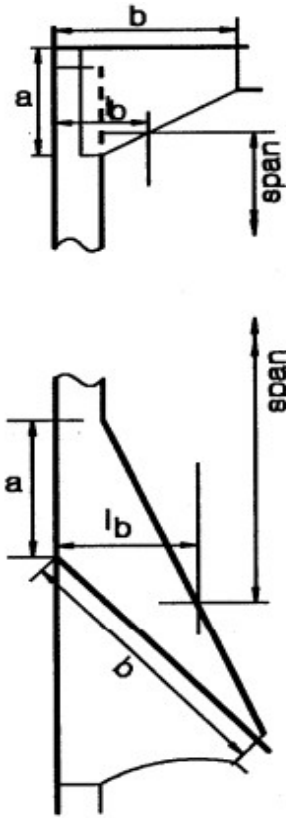
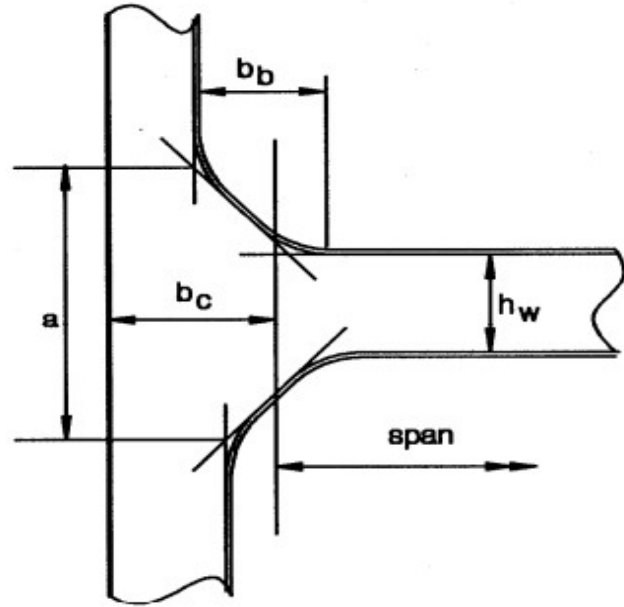


Fig.4.1.1



$$b_c = b_b (1 - h_w/a)$$

Fig.4.1.2

### Figure

#### 4.2 Effective width of attached plating

- 4.2.1 The area of the attached plating, to be used in the calculation of sectional properties of the stiffeners and girders, is to be taken as the cross-sectional area within the effective width of the attached plating.
- 4.2.2 The effective width of plating attached to a stiffener may be taken as the mean of spacing on either side of the stiffener.
- 4.2.3 The effective width of plating attached to a girder, 'be' is to be taken as per the following:  $b_e = c.b$ .

Where,

$c = c_1$ , for girders with uniformly distributed loads or with six or more evenly spaced point loads =  $c_2$ , for girders with three or less evenly spaced point loads.

| <b>Table 4.2.3 : Values of "c"</b> |      |      |      |      |      |      |      |      |
|------------------------------------|------|------|------|------|------|------|------|------|
| a/b                                | 0.5  | 1.0  | 2.0  | 3.0  | 4.0  | 5.0  | 6.0  | ≥7.0 |
| c <sub>1</sub>                     | 0.19 | 0.38 | 0.67 | 0.84 | 0.93 | 0.97 | 0.99 | 1.00 |
| c <sub>2</sub>                     | 0.11 | 0.22 | 0.40 | 0.52 | 0.65 | 0.73 | 0.78 | 0.80 |

For intermediate values of a/b and number of point loads, values of 'c' may be obtained by interpolation. a = span of girder, for simply supporting girders, (m).

= 60 percent of span of girder, for girders fixed at both ends. (m)

4.2.4 In case of girders on corrugated bulkheads which run across the corrugations, the effective width of attached plating is to be taken as 10% of that obtained from 4.2.3.

4.2.5 The effective cross sectional area of the attached plating is not to be less than that of the face plate.

### 4.3 Scantlings of stiffeners

4.3.1 The section modulus 'Z' of stiffeners subjected to lateral pressure is not to be less than:-

$$Z = \frac{s.p.l^2}{m\sigma} + Z_c(\text{cm}^3) \quad \text{Where,}$$

m = bending moment factor depending on the arrangement at the supports and variation of lateral pressure as given in the relevant chapters. Where not stated, the 'm' value may generally be taken as:-

= 12 for continuous longitudinal stiffeners

= 10 for transverse, vertical and non-continuous longitudinal stiffeners fixed at both ends.

= 8 for stiffeners simply supported at both ends.

4.3.2 Where stiffeners are not perpendicular to the plating, the section modulus as obtained from 4.3.1 is to be increased by the factor  $\csc \alpha$  being the angle between the stiffener web and the plane perpendicular to the plating.

### 4.4 Scantlings of girders

4.4.1 The scantlings of simple girders subjected to lateral pressure which can be considered as conforming to the general beam theory are to satisfy the requirement given in 4.4.2

4.4.2 The section modulus 'Z' of girders subjected to lateral pressure is not to be less than.

$$Z = \frac{b.p.s^2.10^8}{m\sigma} + Z_c(\text{cm}^3) \quad \text{Where,}$$

m = bending moment factor depending upon the arrangement at supports and variation of lateral pressure as given in the relevant chapters. Where not stated, the 'm' value

may generally be taken as 12 for continuous longitudinal girders and 10 for all other girders.

- 4.4.3 Where opening are cut in the girder web, they are to be away from the girder ends and scallops for stiffeners; with their center located as near to the neutral axis of the girder as practicable. Openings of depth exceeding 25% of the girder depth or 300 (mm) and, of length exceeding the depth of the girder or 60% of the secondary stiffener spacing, are to be reinforced all around at the edge; or alternatively by providing horizontal and vertical stiffeners.
- 4.4.4 Girders are to be provided with adequate lateral stability by tripping brackets fitted generally at every fourth stiffener. Tripping brackets are also to be fitted at the toes of end brackets and in way of concentrated loads such as heels of pillars or crossties.

## Section 5

### End Attachments

#### 5.1 End attachments of stiffeners

- 5.1.1 Continuity of all stiffeners participating in longitudinal strength is to be maintained over transverse members within 0.5 L amidships. Longitudinal abutting at transverse members may be accepted provided the brackets connecting the ends of the longitudinal are of adequate size and are either continuous or properly aligned.
- 5.1.2 Scantlings of brackets fitted on stiffeners not participating in longitudinal strength are not to be less than the following:-

- The arm lengths, 'a and b' (See Fig. 4.1.1) are to be such that:-

i)  $a, b \geq 0.8L_8$

and

ii)  $a + b \geq 2.0 l_b,$

Where,

$$l_b = 24 \sqrt{Z} + 75(\text{mm})$$

- Thickness of un-flanged bracket is to be not less than:-

$$t = (4.0 + 0.3 \sqrt{Z} + t_c)(\text{mm})$$

- Thickness of flanged bracket is to be not less than:-

$$t = (3.0 + 0.25 \sqrt{Z} + t_c)(\text{mm})$$

- Width of flange,  $w \geq + Z/25$  (mm), but not less than 50 (mm).

where,

Z is the section modulus ( $\text{cm}^3$ ), of the smaller stiffener, being connected.

## 5.2 End attachment of girders

- 5.2.1 The end attachments and supporting structure of the girders are to provide adequate resistance against rotation and displacement of the joint and effective distribution of load from the member. Supporting members to which the girder are being connected, may require additional strengthening to provide adequate stiffness to resist rotation of the joint.

Where the end attachment provides only a low degree of restraint against rotation, the girder is generally to be extended beyond the point of support by at least two frame spaces before being gradually tapered.

Connections between girders forming a ring system are to be such as to minimize stress concentrations at the junctions. Integral brackets are generally to be radii used or well-rounded at the toes.

Where the face plate of the girder is not continuous over the bracket, the free edge of the bracket is to be stiffened and the face plate of the girder is to be extended well beyond the toe of the bracket.

- 5.2.2 The thickness 't' of brackets on girders is not to be less than that of the girder web.

The arm length 'a' including the depth of girder is not to be less than:-

$$a = 83 \frac{\sqrt{Z}}{t} (mm);$$

where,

Z = the section modulus (cm<sup>3</sup>), of the girder to which the bracket is connected.

The cross sectional area 'A' of the face plate on the girder bracket is not to be less than:-

$$A_f = 0.001 l_f (cm^2)$$

Where, l<sub>f</sub> is the length (mm), of the free edge of the bracket.

Additional stiffeners parallel to the bracket face plate are to be fitted on webs of larger brackets. The arm length of an un-stiffened triangular end panel of bracket is generally not to exceed 100 t (mm).



## Section 6

### Buckling

#### 6.1 General

6.1.1 The critical buckling stress  $\sigma_{cr}$  of plate panels and other members subjected to compressive loads is to be such that:-

$$\sigma_{cr} \geq \frac{\sigma_c}{\eta}$$

Where,

$\sigma_c$  = compressive stress to be considered as per Sec. 6.3

$n = 1.0$  for deck, longitudinally stiffened side shell and single bottom plating.

$= 0.9$  for bottom, inner bottom plating in double bottom and transversely stiffened side shell plating

$= \frac{0.7}{1 + l_m/i}$  (need not be taken smaller than 0.3):-

- For axially loaded members such as pillars, cross-ties, panting beams etc., in general – to be reduced by 15 percent where the loads are primarily dynamic in nature.
- For ' $l_m$ ' and ' $i$ ' See 6.2.2.

6.1.2 The critical compressive buckling stress  $\sigma_{cr}$  determined as follows is not to be less than the maximum compressive stress developed in the members under consideration.

$$\begin{aligned} \sigma_{cr} &= \sigma_E \text{ when } \sigma \leq 0.5\sigma_y \\ &= \sigma_y (1 - \sigma_y/4\sigma_E) \text{ when } \sigma_E > 0.5\sigma_y \end{aligned}$$

Where,

$\sigma_E$  = ideal elastic buckling stress as per Sec. 6.2.

#### 6.2 Ideal elastic buckling stress

6.2.1 The  $\sigma_E$  value for plating may be taken as:-

$$\sigma_E = 0.9 K E (t - t_c)/s)^2 \text{ (N/mm}^2\text{)}$$

Where,

$$K = \frac{8.4}{\psi + 1.1}$$

- For plating with stiffeners in the direction of the compressive stress
 
$$= c \left[ 1 + \left( \frac{s}{1001} \right)^2 \right]^2 \left( \frac{2.1}{\psi + 1.1} \right) =$$
- For plating with stiffeners in the direction perpendicular to the compressive stress  $\psi$  = ratio between the smaller and the larger values of the compressive stress assuming a linear variation (See Fig 6.2.1)

$C = 1.30$  when plating is stiffened by floors or deep girders

$= 1.21$  when stiffeners are angles or T sections

$= 1.10$  when stiffeners are bulb flats

$= 1.05$  when stiffeners are flat bars

$s$  = shorter side of plate panel, (mm)

$l$  = longer side of plate panel, (m)

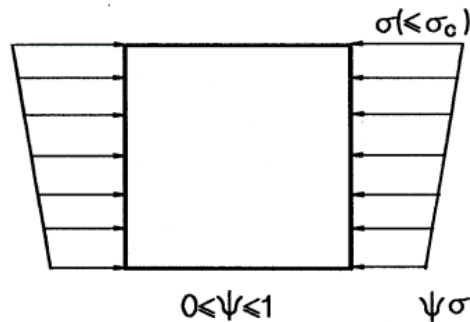


Fig. 6.2.1

### Figures

6.2.2 The value of axially loaded members may be taken as:-

$$\sigma_E = 0.001 C E (i/l_m)^2 \text{ (N/mm}^2\text{)}$$

$C = 1.0$  for both ends hinged;  $= 2.0$  for one end fixed;  $= 4.0$  for both ends fixed

$i$  = radius of gyration of the member, (cm).

$$= (I/a)^{1/2}$$

$I$  = moment of inertia of the member, (cm<sup>4</sup>), about the axis perpendicular to the direction of buckling being considered

$a$  = cross sectional area of the member, (cm<sup>2</sup>)

$l_m$  = length of the member, (m).

Where end connections of a member are different with respect of the two principal  $\sigma_E$  is to be found out for both cases using appropriate values of 'C' and 'I'.

**End of Chapter**

**Chapter 4**  
**Longitudinal Strength**  
**Contents**

**Section**

- 1 General
- 2 Vertical Bending Moments
- 3 Hull Section Modules and Moment of inertia
- 4 Openings of Longitudinal Strength Members

**Section 1**  
**General**

**1.1 Application**

- 1.1.1 Scantlings of hull members contributing to longitudinal strength are to comply with the requirements given in this Chapter. These members are also to comply with requirements of buckling strength given in Ch.3, Sec. 6 and of local strength given in relevant chapters of Pt. 3.
- 1.1.2 Still water bending moments are to be calculated for all vessels with unusual or non-uniform weight or cargo distribution and for other vessels of  $L \geq 60$  m.  
Such vessels are to be provided with an approved loading manual which describes the loading conditions on which the design is based and also given the values of still water bending moments and permissible limits.

**1.2 Symbols**

L, B, T, k as defined in Ch. 1 Sec. 2

$I_n$  = moments of inertia of hull girder, (cm<sup>4</sup>), about the transverse neutral axis at the section under consideration.

$Z_n$  = vertical distance (m) of the horizontal neutral axis above base line.

$M_s$  = design still water bending moment (KN-m) as given in 2.1.2.

$M_w$  = rule wave bending moment (kN-m) as given in 2.2.1.

## Section 2

### Vertical Bending Moments

#### 2.1 Still water bending moment

2.1.1 Still water bending moments are to be calculated for the following loading conditions as a minimum:

- a) Fully loaded condition with design cargo distribution (S)
- b) Light condition with full consumables, stores, crew and ballast, if any.

In addition other loading conditions which may be more onerous, e.g. intermediate conditions of special loading or discharging sequences, are to be investigated.

2.1.2 The design value of still water bending moment  $M_s$  to 0.4 L amidships is to be taken as the greater of the following:-

- a) The maximum of sagging or hogging still water bending moments obtained for the loading conditions specified in Sec. 2.1.1. and
- b)  $0.375 L^2 B$  (KN-m)

At locations outside 0.4 L amidships the design value of still water bending moments  $M_s$  may be linearly reduced to zero at perpendiculars.

#### 2.2 Wave load conditions

2.2.1 The rule vertical wave bending moment  $M_w$  for 0.4 L amidships is to be taken as

$$M_w = CL^2B \text{ (kN – m)}$$

Where,

C = coefficient as per Table 2.2.1.

| Table 2.2.1 |   |
|-------------|---|
| Zone        | Coefficient C   |
| 1           | $0.30 \text{ for } L \leq 20 \text{ m}$<br>$0.3 + 0.05 (L - 20) \text{ for } 20 < L < 60$<br>$0.5 \text{ for } L \geq 60 \text{ m}$ |
| 2           | 0.3   |
| 3           | 0.15  |

At locations outside 0.4L amidships, the value of rule wave bending moment  $M_w$  is to be linearly reduced to zero perpendiculars.

### Section 3

#### Hull Section Modulus and Moments of Inertia

##### 3.1 Calculation of section properties

3.1.1 When calculating the moment of inertia and section moduli, the net sectional area (after deduction for openings) of all continuous longitudinal strength members is to be taken into account. Small isolated lightening holes in girders need not be deducted. Superstructures not forming strength deck (See Ch. 1, Sec. 2.2), deckhouses, bulwarks and non-continuous longitudinal hatch coamings are not to be included in above calculations.

In case of vessels with continuous trucks or longitudinal hatch coamings, their net sectional area may be included in the calculations provided they are effectively supported by longitudinal bulkheads or deep girders. The section modulus at deck however, is then to be calculated as given in 3.1.3.

3.1.2 The main strength members included in the calculation of hull moment of inertia and section modulus are to extend continuously through the cargo region and sufficiently far towards the ends of the vessel. Longitudinal bulkheads are to terminate at effective transverse bulkhead and large transition brackets are to be fitted in line with the longitudinal bulkheads.

3.1.3 The mid ship section modulus 'Z' at deck or bottom about the transverse neutral axis is to be obtained as follows:-

$$Z = I_n / (100.z) \text{ (cm}^3\text{)}$$

Where,

z = the vertical distance (m) from the horizontal neutral axis upon the strength deck at side or the base line, as relevant.

However, in case of vessels where continuous trunks or longitudinal hatch coamings are to be included in the section modulus calculation as per Sec. 3.1.1 the distance z for calculation of modulus at deck is to be taken as the greater of the following:-

z = z as above

$$z = z_n (0.9 + 0.2 y/B)$$

Where,

$Z_n$  = the vertical distance from the horizontal neutral axis to top of continuous strength member.

y = athwart ship distance from the centerline of the vessel to the side of the strength member.

$z_n$  and  $y$  are to measured to the point giving the largest value of  $z$ .

### 3.2 Extent of high tensile steel

- 3.2.1 Where high tensile steels are used in the main hull structure in order to reduce the section modulus requirement, the vertical and longitudinal extent of its use is to be such that adjacent structure made of ordinary hull structural steel is not stressed beyond the stress level permissible for ordinary steel.

### 3.3 Section modulus requirement

- 3.3.1 At any transverse section, the hull section modulus  $Z$ , about the transverse neutral axis for the still water bending moments  $M_s$  given in 2.1 and wave bending moments  $M_w$  given in 2.2 is not to be less than:-

$$Z = \left( \frac{M_s + M_w}{\sigma_L} \right) \times 10^3 [\text{cm}^3]$$

Where,

$$\sigma_L = 175/k \text{ (N/mm}^2\text{) within } 0.4 L \text{ amidships}$$

$$= 125/k \text{ (N/mm}^2\text{) within } 0.1 L \text{ from AP. and F. P.}$$

Between the specified region  $a_L$  is to be obtained by linear interpolation.

- 3.3.2 Scantlings of all continuous longitudinal members of hull girder based on the section modulus requirement in 3.3.1 are to be maintained within 0.4 L amidships.

In the region outside 0.4 L amidships, the scantlings are to be gradually tapered to the local requirements at the ends.

### 3.4 Moment of inertia requirement

- 3.4.1 The moment of inertia in of the hull section about the transverse neutral axis, at mid-ship, is not to be less than:-

$$I_n = 3 L. Z(\text{cm}^4) \text{ Where,}$$

$Z$  = Hull section modulus amidships as required by 3.3.1.

## Section 4

### Openings in Longitudinal Strength Members

#### 4.1 Locations

- 4.1.1 As far as practicable, openings are to be avoided in the keel plate and in the bilge plate within 0.6 L amidships.

- 4.1.2 Openings in the strength deck within 0.6 L amidships are as far as practicable to be located inside the line of large hatch openings.

Necessary openings outside this line are to be kept well clear of the vessel's side and hatch corners.

- 4.1.3 Small openings are generally to be kept well clear of other openings in the longitudinal strength members.

## **4.2 Reinforcements**

- 4.2.1 All openings are to be adequately framed and arrangements in way of corners and openings are to be such as to maintain structural continuity and minimize the creation of stress concentrations.

Corners of hatchways are to be reinforced as given in Ch. 8, Sec. 2. Smaller openings in the strength deck and outer bottom within 0.6 L amidships are to be reinforced as given in 4.2.2 to 4.2.5 below. The area of these reinforcements is not to be included in the sectional areas used in the section modulus calculation.

- 4.2.2 Circular openings with diameter equal to or greater than 0.325 (m) are to have edge reinforcement having sectional area A not to be less than:-

$$A = 2.5 b.t. \text{ (cm}^2\text{)}$$

Where,

b = diameter of opening (m)

t = thickness of the plating (mm).

- 4.2.3 Elliptical openings are to have their major axis in the fore and aft direction. Where the ratio of the major axis to minor axis is less than 2, the openings are to be reinforced as given in 4.2.2 taking b as the breadth of the opening (minor axis).

- 4.2.4 Rectangular openings are to have their corners well rounded. Where corners are of circular shape the radius is not to be less than 20 per cent of the breadth of the opening and the edges are to be reinforced as given in 4.2.2 taking b as the breadth of the opening.

Where the corners are to elliptical shape as given in 4.2.3 or of streamlined shape as given in 4.3, the reinforcement will generally not be required provided that the transverse extension of the curvature, a, shown in Fig 4.3.2 is not less than:-

$$a = 0.15b \text{ (m)}$$

- 4.2.5 Openings in side shell subjected to larger shear stresses are to be of circular shape and are to be reinforced as given in 4.2.2 irrespective of the size of opening.

## **4.3 Hatchway corners**

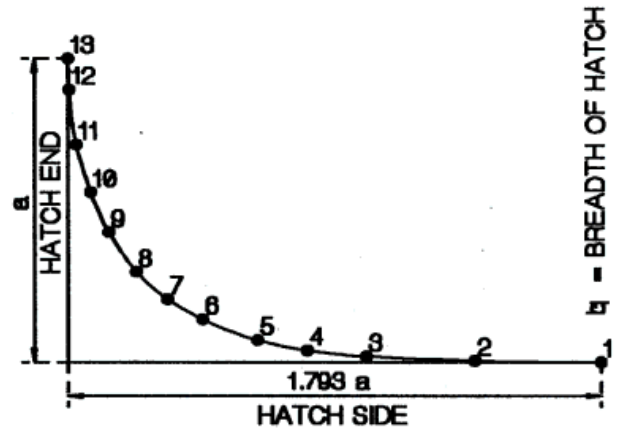
- 4.3.1 Where corners are of circular shape, the radius r within 0.6 L amidships is not to be less than

$$r = 0.05 b \text{ (m), minimum } 0.3 \text{ (m); where,}$$

b = breadth of the hatchway (m)

Where corners are of streamlined shape, as given by Fig. 4.3.2, the transverse extension of the curvature,  $a$ , is not to be less than

$a = 0.05 b$  (m), minimum 0.3 (m)



Figure

| Ordinates of streamlined corner |             |             |
|---------------------------------|-------------|-------------|
| Point                           | Abscissa, x | Ordinate, y |
| 1                               | 1.793a      | 0.0         |
| 2                               | 1.381a      | 0.002a      |
| 3                               | 0.987a      | 0.021a      |
| 4                               | 0.802a      | 0.044a      |
| 5                               | 0.631a      | 0.079a      |
| 6                               | 0.467a      | 0.131a      |
| 7                               | 0.339a      | 0.201a      |
| 8                               | 0.224a      | 0.293a      |
| 9                               | 0.132a      | 0.408a      |
| 10                              | 0.065a      | 0.548a      |
| 11                              | 0.022a      | 0.712a      |
| 12                              | 0.002a      | 0.899a      |
| 13                              | 0.0         | 1.000a      |

Fig. 4.3.2: Streamlined deck corner

End of Chapter



**Chapter 5**  
**Bar, Keel, Stem and Stern frames**  
**Content**

**Section**

- 1 General
- 2 Bar Keel
- 3 Stern
- 4 Stem Frames

**Section 1**

**General**

**1.1 Scope**

- 1.1.1 This chapter provides requirements for bar keel, bar stem, stern frames and shaft brackets.

**1.2 Material**

- 1.2.1 All steel plates and sections, castings and forgings used in the constructions are to be tested and approved in accordance with the requirements of Ch.3, Ch. 4 and Ch. 5 of Pt. 2 'Materials' of the Rules & Rules for the Construction and Classification of Steel Vessels (Main Rules), respectively. Material grades for plates and sections are to be selected as per Pt 3, Ch.2
- 1.2.2 Bar keels and stems may either be steel castings or forgings or rolled plates or bars.
- 1.2.3 Stern frames, rudder hors and shaft brackets may be constructed of cast or forged steel or may be fabricated from plates.

**1.3 Symbols**

- 1.3.1 L, T as defined in Ch. 1, Sec. 2.

**Section 2**

**Bar Keel**

**2.1 Scantlings**

- 2.1.1 The scantlings of bar keel are not to be less than:-  
Depth =  $75 + 0.75 L$  (mm)  
Thickness =  $10 + 0.4 L$  (mm)

Minor deviations from the above values may be accepted provided the required sectional area is maintained.

### **Section 3**

#### **Stem**

##### **3.1 Bar stem**

- 3.1.1 The cross sectional area 'A' of a bar stem, below the summer load waterline, is not to be less than

$$A = 0.6 L \text{ (cm}^2\text{); or } 12 \text{ (cm}^2\text{)}$$

- Whichever is greater.

##### **3.2 Plate stem**

- 3.2.1 The thickness 't' of the plates stem below the summer load water line is not to be less than:  $t = (0.08 L + 5.0) \text{ (mm)}$
- 3.2.2 The thickness of the plate stem may be gradually reduced to that of the side shell at the stem head.
- 3.2.3 The plate stems are to be supported by horizontal diaphragms spaced not more than 1.0 (m) apart. Where the stem plate radius is large, a centerline stiffener or web is to be provided.

### **Section 4**

#### **Stern Frames**

##### **4.1 General**

- 4.1.1 Stern frames, shaft brackets etc. are to be designed such that they are effectively integrated into the vessel's structure.
- 4.1.2 In castings, sudden changes of section or possible constrictions to the flow of metal during castings are to be avoided. All fillets are to have adequate radii, which in general should not be less than 50 to 75 (mm), depending on the size of the casting.
- 4.1.3 Fabricated and cast steel stern frames are to be strengthened at intervals by webs spaced not more than 700 (mm) apart. In way of the upper part of the stern frame arch, these webs are to line up with the floors.
- 4.1.4 Rudder posts and propeller posts are to be connected to floors of increased thickness.
- 4.1.5 It is recommended that the after body of the vessel be so shaped as to ensure adequate flow of water to the propeller so as to prevent uneven formation of eddies, as far as possible.

## 4.2 Stern frames

4.2.1 The scantlings of the propeller posts are not to be less than the following:-

Forged propeller posts (see Fig. 4.2.1 (a))

$$A = (8 + 0.4L) T \text{ (cm}^2\text{) for } L < 60 \text{ (m)}$$

$$= 32 T \text{ (cm}^2\text{) for } L > 60 \text{ (m)}$$

Fabricated propeller posts (see Fig. 4.2.1 (b))

$$l = 150 \sqrt{T} \text{ (mm)}$$

$$w = 100 \sqrt{T} \text{ (mm)}$$

$$r = 18 \sqrt{T} \text{ (mm)}$$

$$t_1 = \sqrt{T} \text{ (mm)}$$

$$t_w = 5 \sqrt{T} \text{ (mm)}$$

Cast steel propeller posts (see Fig. 4.2.1 (c))

$$l = 125 \sqrt{T} \text{ (mm)}$$

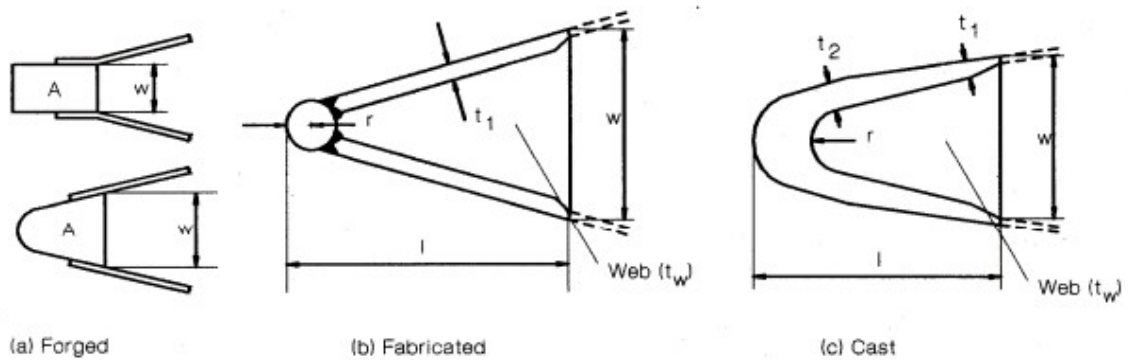
$$w = 85 \sqrt{T} \text{ (mm)}$$

$$r = 20 \sqrt{T} \text{ (mm)}$$

$$t_1 = 12 \sqrt{T} \text{ (mm)}$$

$$t_2 = 14 \sqrt{T} \text{ (mm)}$$

$$t_w = 7 \sqrt{T} \text{ (mm)}$$



**Fig.4.2.1 : Types of propeller posts**

### Figure

Where the sections adopted differ from the above, the section modulus about the longitudinal axis is to be equivalent to that with the Rule scantlings.

On stern frames without sole pieces, the modulus of the propeller post, about the longitudinal axis, may be gradually reduced by 15 percent below the propeller boss, provided the thicknesses are maintained as above.

- 4.2.2 The wall thickness of the boss ' $t_b$ ' in the propeller post is not to be less than:  $t_b = 0.25 d_{ts} + 12$  (mm)

Where,

$d_{ts}$  = Rule diameter of tail shaft, (mm)

In fabricated stern frames the connection of the propeller post to the boss is to be by full penetration welds.

### 4.3 Sole Piece

- 4.3.1 The section modulus ' $Z_T$ ' of the sole piece against transverse bending is not to be  $1/90 c F_r$  less than  $Z_T$  ( $\text{cm}^3$ ) Where,

$F_r$  = Rudder force (N) as defined in Pt. 3 Ch. 12, Sec. 3

$x$  = distance of the cross section under consideration from the center line of rudder stock, \*m+. ' $x$ ' is not to be taken as less than  $a/2$ .

$a, b, c$  = shown in Figures 4.3.1 (a) and (b) (m).

The above requirement of  $Z_T$  it to be increased by 15 percent for cast steel sole pieces.

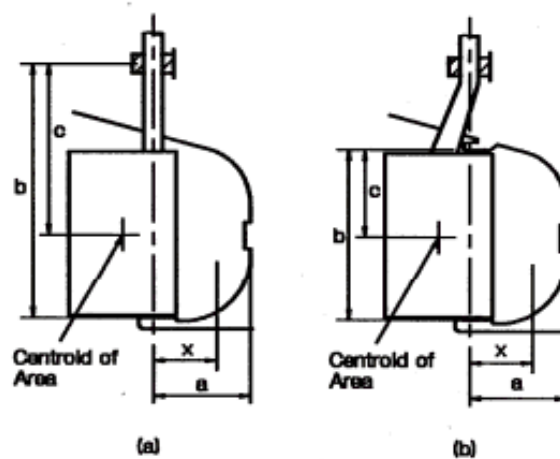


Fig.4.3.1 : Open stern frame

### Figure

- 4.3.2 The section modulus ' $Z_v$ ' of the sole piece against vertical bending is not to be less than:-

$$Z_v = Z_T/2 \text{ (cm}^3\text{)}$$

4.3.3 The sectional area of sole piece is not to be

$1/5400$  less than  $A_s = (\text{cm}^2)$

4.3.4 The sole piece is to extend at least two frame spaces forward of the forward edge of the propeller boss and beyond this, the cross section of the extension is to be gradually reduced to that necessary for an efficient connection to the keel plate. Fabricated sole pieces are to have adequate internal stiffening.

#### **4.4 Shaft brackets**

4.4.1 Where the propeller shafting is exposed to the sea for some distance clear of the main hull, it is generally to be supported adjacent to the propeller by independent brackets having two arms. It is recommended that the angle included between the arms differ from the angle included between the propeller blades. In very small vessels the use of single arm brackets will be considered.

4.4.2 Fabricated brackets are to be designed to avoid or reduce the effect of hard spots and ensure a satisfactory connection to the hull structure. The connection of the arms of the bearing boss is to be by full penetrating welding.

4.4.3 Generally, bracket arms are to be carried through the shell plating and attached to floors or girders of increased thickness. The shell plating in way of shaft brackets is to be increased in thickness to a minimum of 1.5 times the Rule bottom shell plating thickness amidships. In way of the bracket arms an insert plate is to be provided of thickness not less than:

$t = 1.6 \sqrt{d_{ts}}$  where  $d_{ts}$  is the tail shaft diameter.

The connection of the bracket arms to the shell plating is to be by full penetration welding.

4.4.4 The scantlings of solid or build-up shaft brackets are to comply with the following:-

$t = 0.4 d_{ts} \text{ (mm)}$

$A = 4.5 d_{ts}^2 \cdot 10^{-3} \text{ (cm}^2\text{)}$

$Z_T = 30 d_{ts}^3 \cdot 10^{-6} \text{ (cm}^3\text{)}$

$t$  = thickness of the bracket arms

$A$  = cross sectional areas of the bracket arms

$Z_T$  = Section modulus of the bracket arms against transverse bending

**End of Chapter**

**Chapter 6**  
**Bottom Structure Contents**  
**Contents**

**Section**

- 1 General
- 2 Structural Arrangement and Details
- 3 Design Loads
- 4 Bottom and Inner Bottom plating
- 5 Single Bottom
- 6 Double Bottom
- 7 Engine Seating

**Section 1**  
**General**

**1.1 Scope**

- 1.1.1 The scantlings and arrangement of bottom structure as defined in Ch. 1, Sec. 2 are to comply with the requirements given in this chapter.

**1.2 Symbols**

L, B, T,  $C_b$ , k as defined in Ch. 1, Sec. 2.

s = spacing of stiffeners, (mm)

l = span of stiffeners, (m)

b = spacing of girders, (m)

S = span of girders, (m)

$t_c$ ,  $Z_c$  are corrosion additions to the thickness and section modulus respectively, as given in Ch. 3, Sec. 2.1.

$f_B Z_R/Z_B$  where,

$Z_R$  = Rule mid-ship section modulus ( $\text{cm}^3$ ) as required by Ch.4

$Z_B$  = Actual mid-ship section modulus ( $\text{cm}^3$ ) provided at bottom.

## **Section 2**

### **Structural Arrangement and Details**

#### **2.1 General**

- 2.1.1 Depth of wells constructed in the double bottom, in connection with the drainage arrangement of holds, is to be kept in the minimum.
- 2.1.2 The continuity of the bottom, bilge and inner bottom longitudinal is to be maintained in accordance with Ch. 3, Sec. 5.1.1
- 2.1.3 The bilge keel and the ground bar to which it is attached are to be gradually tapered at ends and arranged to finish in way of suitable internal stiffening, Butt welds in the bilge keel and the ground bar are to be well clear of each other and those in the shell plating.
- 2.1.4 The weld connections are to comply with the requirements of Ch. 16.

#### **2.2 Access, ventilation and drainage**

- 2.2.1 Adequate access it to be provided to all parts of the double bottom, where the vertical dimension of the lightening hole exceeds 50 percent of the web height adequate reinforcements are to be provided. The diameter reinforcement are to be provided. The diameter of lightening holes in the bracket floors is not to exceed 1/3 of the breadth of the brackets.

Lightening holes or manholes are normally not to be cut in floors or girders towards their ends and under large pillars supporting structures. Manholes in inner bottom are to have reinforcement rings, and the man hole covers in the inner bottom plating in cargo holds are to be effectively protected. The edges of all holes are to be smooth.
- 2.2.2 To ensure the free passage of air and water from all parts of the tanks of air pipes and suctions, air and drain holes are to be provided in all non-watertight members. The air holes are to be placed as near to the inner bottom as possible and their total area is to be greater than the area of the fitting pipes. The drain holes are to be placed as near to the bottom as possible.
- 2.2.3 The access opening to pipe tunnel is to be visible above the floor plates and is to be fitted with a rigid water tight closing device. A notice board stating that the access opening to the pipe tunnel is to be kept closed, is to be fitted near the opening. The opening is to be regarded as an opening in water tight bulkhead.

### Section 3

#### Design Loads

#### 3.1 Bottom shell

3.1.1 The design process 'p' \*kN/m<sup>2</sup> on outer bottom is to be taken as = 10 t<sub>1</sub>(kN/m<sup>2</sup>)

| Table 3.1.1 : Values of T <sub>1</sub>   |  |
|--|--|
| Zone   | T <sub>1</sub>   |
| 1  | T + 1.0 (m) for L > 60 (m)<br>T + 0.6 (m) for L < 20 (m) |
| 2  | T + 0.6 (m)  |
| 3  | T + 0.3 (m)  |
| For intermediate values of L in Zone 1, T <sub>1</sub> to be linearly interpolated |  |

In way of tanks, the design pressure is not to be taken less than integral pressure 'p' given in 3.2.1

#### 3.2 Watertight floors and girders

3.2.1 The design pressure 'p' on watertight floors and girders in double bottom tanks is to be taken as the greater of:

$$p = 6.7 h_p \text{ (kN/m}^2\text{)}$$

$$p = 10 (h_s + 1) \text{ (kN/m}^2\text{)}$$

$h_p$  = vertical distance (m), from the load point to the top of air pipe.

$h_s$  = vertical distance (m), from the load point to top of the tank.

#### 3.3. Inner bottom

3.3.1 The design pressure 'p' on the inner bottom to be taken as the greater of that given in 3.2.1 and the following:-

In way of cargo hold, the design pressure 'p' is not to be taken as less than:-

$$p = 12.5 p_H \text{ (kN/m}^2\text{)}$$

Where,

$p$  = cargo density (t/m<sup>3</sup>) normally not to be taken as less than 0.7 (t/m<sup>3</sup>)

$H$  = height (m), to deck or top of hatchway coaming.



## Section 4

### Bottom and Inner Bottom Plating

#### 4.1 Keel plate

- 4.1.1 The width of the plate keel is not to be less than  $(400 + 10L)$  (mm). The thickness is to be 1 (mm) greater than that required for the adjacent bottom plating.

#### 4.2 Bottom, bilge and inner bottom plating

- 4.2.1 The thickness of the bottom and inner bottom plating is to be not less than:-  
- for bottom plating

$$t = (t_o + 0.04L) \sqrt{k} + t_c \text{ (mm)}$$

for inner bottom plating

$$t = (t_o + 0.03L) \sqrt{k} + t_c \text{ (mm) but not less than 6.0 (mm)}$$

Where,

$t_o = 4.0$  (mm), in general.

$= 6.0$  (mm), for inner bottom plating where ceiling is not fitted.

$= 4.0$  (mm) for inner bottom plating where wooden ceiling of 50 (mm) thickness is fitted.

- 4.2.2 The bottom, bilge and inner bottom plating is also to comply with the requirements of buckling strength given in Ch.3, Sec. 6.
- 4.2.3 For vessels discharged by grabs and where no ceiling is fitted, the plating thickness 't' of the inner bottom and exposed parts of sloping bulkheads is not to be less than:-  
 $t = 0.0085 (s+800) \sqrt{k} + t_c \text{ (mm)}$
- 4.2.4 Where the inner bottom is subjected to wheel loads from cargo handling vehicles, the scantlings are also to comply with the requirements given in Ch.8, Sec. 6.

## Section 5

### Single Bottom

#### 5.1 Transverse framing

- 5.1.1 Plate floors of following scantlings are to be fitted at every frame.

Depth at centerline  $d = 40B$  (mm) in general thickness of web,  $t = d/100 + 2.5$  (mm)

Section modulus

$$Z = 0.006 s.l_f^2 \cdot T1(\text{cm}^3) \text{ in cargo holds}$$

$$= 0.0072 s.l_f^2 \cdot T1(\text{cm}^3) \text{ in machinery and other spaces.}$$

Where,

$l_f$  = span of floor, measured on the top of floor plate from side to side.

= longitudinal bulkheads are provided the span,  $l_f$  not to be taken less than  $0.4B$

$T_1$  is as defined in 3.1.1

The thickness of face plate is not to be less than  $1/15$  of the face width.

The top of floors, in general is to be level from side to side. However, in vessels having considerable rise to floor, the depth of web at 10 percent of the span from ends, is not to be less than half the depth at centerline.

If the height of floors between engine girders is reduced in way of crankcase, the face plate area is to be suitably increased, however the reduced height is normally not to be less than  $2/3$  of 'd' as given above.

- 5.1.2 On all vessels one center girder is to be fitted and in addition side girders are to be fitted such that spacing of girders does not exceed 3.0 (m). The girders are to be extend as far forward and aft as practicable and where they are cut at transverse bulkheads the longitudinal continuity is to be maintained. Where the bottom structure changes into a double bottom structure, the bottom girders are to extend at least 3 frame spaces in to double bottom structures.

The scantlings of the center girders and side girders are to be not less than that of the floors. The thickness of face plates is not to be less than  $1/15$  of the face width.

- 5.1.3 In the after peak of single vessels, the height of the floors is to be increased such that their upper edge is well above the stern tube.
- 5.1.4 Where single bottom in the cargo region is stiffened by transverse frames supported by longitudinal girders, the scantlings of the frames and longitudinal girders are to be determined in accordance with 6.2.3 and 5.2.3, 5.2.4 respectively.

## 5.2 Longitudinal framing

- 5.2.1 The spacing of bottom transverses is normally not to exceed 3.0 (m). The bottom transverses are to be supported by primary girders or longitudinal bulkheads. Where the design does not incorporate a centerline bulkhead, at least a docking girder to be provided. The scantlings of simple girders and transverses are to be obtained in accordance with 5.2.3. The scantlings of a complex girder system are to be based on a direct stress analysis.

- 5.2.2 The section modulus 'Z' of the bottom longitudinal is not to be less than:-

$$Z = \frac{sp l^3}{12\sigma} + Z_c [\text{cm}^3]$$

Where,

$p$  = application design pressure ( $\text{kN/m}^2$ ), as given in 3.1.1.a

$$= (215-140 f_B)/k, \text{ max } 160/k(\text{N/mm}^2)$$

Within 0.4 L amidships

$$= 160/k (\text{N/mm}^2) \text{ within } 0.1 L \text{ from ends.}$$

Elsewhere a may be obtained by linear interpolation.

- 5.2.3 The section modulus 'Z' of bottom girder is not to be less than:-

$$Z = \frac{10^8 b p s^2}{m \sigma} + Z_c (\text{cm}^3)$$

Where,

$m = 10$  in general

$p$  = applicable design pressure ( $\text{kN/m}^2$ ), as given in 3.1.1

$a = (190-130f_B)k, \text{ max } 160/k(\text{N/mm}^2)$  for continuous longitudinal girders within 0.4 L amidships.

$$= 160/k (\text{N/mm}^2)$$

For longitudinal girder within 0.1 L from ends and for transverse girders in general.

Elsewhere a may be obtained by linear interpolation.

- 5.2.4 Tripping brackets are to be fitted in accordance with the requirements given in Ch.3, Section 4.4.4.

## Section 6

### Double Bottom

#### 6.1 General

- 6.1.1 Where double bottom spaces are used as tanks, the center girder is to be watertight unless the double bottom is divided by watertight side girders or the tanks are narrow.

The depth 'd' of the center girder is not to be less than: \_

$$d = 250 + 20B + 50T (\text{mm}),$$

with a minimum of 650 (mm).

In case of vessels with considerable rise of floors the depth 'd' may have to be increased.

- 6.1.2 The thickness 't' of the bottom girders and floors is not to be less than:-

$$t = (0.007d + 3) \sqrt{k} (\text{mm}).$$

- 6.1.3 The section modulus 'Z' of the stiffeners on girders and floors forming boundaries of double bottom tanks is not to be less than:-

$$Z = \frac{spl^2}{10\sigma} + Z_c (\text{cm}^3) \text{ Where,}$$

$p$  = design pressure ( $\text{kN/m}^2$ ), as given in 3.2.1;

$\sigma = (210 - 130 f_B)/k$ , max.  $160/k$  ( $\text{N/mm}^2$ ) for longitudinal stiffeners within 0.4L amidships

$= 160/k$  ( $\text{N/mm}^2$ )

For longitudinal stiffeners within 0.1 L from ends and for transverse or vertical stiffeners in general. Between the regions specified above  $\sigma$  for longitudinal stiffeners may be obtained by linear interpolation.

Longitudinal stiffeners are to have end connections, other stiffeners may be sniped at ends provided the section modulus  $Z$  increased by 50 percent.

- 6.1.4 The longitudinal girders are to be satisfactorily stiffened against buckling in accordance with the requirements given in Ch.3, Sec. 6.

## 6.2 Transverse framing

- 6.2.1 The side girders are normally to be fitted at a spacing not exceeding 4.0 (m) and are to be extended as far forward and aft as practicable. The girders are to be stiffened at every bracket floor by a vertical stiffeners of depth same as that of reverse frame and thickness that of the girder.

- 6.2.2 Plate floors are to be fitted under bulkheads, pillars, thrust seating, boiler bearers and in way of change of depth of double bottom. In engine room plate floors are to be fitted at every frame, Elsewhere plate floors are to be fitted at least every fifth frame, the spacing not exceeding 3.0 (m).

- 6.2.3 Where bracket floors are fitted the section modulus 'Z' of the bottom frames and reverse frames is not to be less than:-

$$Z = \frac{p l^2 k}{1.6} + 10^{-3} + Z_c (\text{cm}^3) \text{ where,}$$

$p$  = applicable design pressure ( $\text{kN/m}^2$ ), as given in 3.1.1 and 3.3.1 for bottom frames and reverse frames respectively.

$l$  = span of frames (m) measured between girder or brackets.

Where vertical struts according to 6.2.4 are fitted, the section modulus of bottom and reverse frames may be reduced by 35 percent.

- 6.2.4 The cross sectional area 'A' of the struts is not to be less than  $A = c \cdot k \cdot l \cdot s \cdot T$  ( $\text{cm}^2$ ) where,

$c = 7 \times 10^{-4}$  in way of ballast tanks.

$= 6 \times 10^{-4}$  elsewhere

$l$  = actual span (m), without considering the strut.

The moment of inertia I of the struts is not to be less than:-

$$I = 2.5 A \cdot d^2 \times 10^{-6} \text{ (cm}^4\text{) where,}$$

d = depth of double bottom, (mm).

- 6.2.5 The bottom frames and reverse frames are to be attached to the centre girder and margin plate by means of brackets of same thickness as that of the plate floors. The breadth of the brackets is not to be less than 0.75 times the depth of the centre girder and the brackets are to be flanged 75 (mm) at their free edges.

### 6.3 Longitudinal framing

- 6.3.1 The side girders are normally to be fitted at a spacing not exceeding 5.0 (m) and are to be extended as far forward and aft as practicable.
- 6.3.2 The plate floors are to be fitted under bulkheads, pillars, thrust seating and boiler bearers. In engine room, plate floors are to be fitted at every second side frames. Additionally, under the main engine seating, floors extending to the first side girder outside the engine seating, are to be fitted at intermediate frames. The spacing of floors is normally not exceed 3.0 (m)
- 6.3.3 The plate floors are to be stiffened at every longitudinal by a vertical stiffener of depth same as that of the inner bottom longitudinal and thickness as that of the floor. Between plate floors, transverse brackets are to be fitted at every frame at the margin plate and at a spacing not exceeding 1.25 (m) on either side of the centre girder. The thickness of brackets is to be same as that of the plate floors. The brackets are to extend upto the adjacent longitudinal and are to be flanged 75 (mm) at their free edges.
- 6.3.4 The section modulus 'Z' of the bottom and inner bottom longitudinal is not to be less than:-

$$Z = \frac{sp l^2}{12\sigma} + Z_c (\text{cm}^3) \text{ where,}$$

p = applicable design pressure (kN/m<sup>2</sup>), as given in 3.1.1 and 3.3.1 for bottom longitudinal and inner bottom longitudinal respectively:

l = span of longitudinal (m), measured between the plate floors.

$\sigma = (210 - 140 f_B)/K$  (N/mm<sup>2</sup>), maximum 160/k (N/mm<sup>2</sup>) for bottom longitudinal within 0.4 L amidships

$= (210 - 100 f_B)/k$  (N/mm<sup>2</sup>), maximum 160/k (N/mm<sup>2</sup>) for inner bottom longitudinal within 0.4 L amidships

$\sigma = 160/k$  (N/mm<sup>2</sup>) within 0.1 L from ends.

Between the regions specified above,  $\sigma$  may be obtained by linear interpolation.

Where vertical struts according to 6.2.4 are fitted, the section modulus of the bottom and inner bottom longitudinal may be reduced by 35 percent.

## **Section 7**

### **Engine Seating**

#### **7.1 General**

- 7.1.1 It is recommended that the depth of the floors or double bottom in way of engine foundations be increased.
- 7.1.2 Sufficient fore and aft girders are to be arranged in way of the main machinery to effectively distribute its weight and to ensure adequate rigidity of the structure. The girders are generally to extend over the full length of the engine room and are to be suitably scarphed into the bottom structure beyond.
- 7.1.3 The scantlings of engine seating are to be adequate to resist gravitational, thrust, torque, dynamic and vibratory forces which may be imposed on them. The recommendations given by the engine manufacturer are also to be taken into account.
- 7.1.4 Where the top plate of the engine seating is situated above the floors or the inner bottom, adequate transverse strength by means of brackets in line with the floors is to be ensured. In way of the recess for crankcase, brackets as large as practicable are to be fitted.
- 7.1.5 Lightening holes in engine foundations are to be kept as small as practicable and the edges are to be suitably reinforced.

#### **7.2 Recommended scantlings**

- 7.2.1 For engines of power less than 1500 kW and RPM greater than 1200, the scantlings of engine girder face plate, web and floors in way of engine seating may be calculated as given below. Scantlings for other engines will be specifically considered.

Top plate area;  $A = 20 + 120 P/R$  ( $\text{cm}^2$ )

Thickness of top plate;  $t_p = 0.1A + 14$  (mm)

Girder web thickness;  $t_g = 0.043A + 7$  (mm)

Floor web thickness;  $t_r = 0.02A + 6$  (mm)

Where,

P = maximum power of the engine (kW)

R = rpm of engine at maximum power

**End of Chapter**

**Chapter 7**  
**Side Structure**  
**Contents**

**Section**

- 1 General
- 2 Structural Arrangement and Details
- 3 Design Loads
- 4 Side Shell Plating and Stiffeners
- 5 Girders

**Section 1**  
**General**

**1.1 Scope**

- 1.1.1 The scantlings and arrangement of side structure as defined in Ch. 1, Sec. 2 and also those of sides of the superstructures are to comply with the requirements of this Chapter.

**1.2 Symbols**

L, B, T, C<sub>b</sub>, k as defined in Ch. 1, Sec. 2

s = spacing of stiffeners, (mm).

l = span of stiffeners, (m).

b = spacing of girders, (m)

S = span of girders, (m)

t<sub>c</sub>, Z<sub>c</sub> = corrosion addition of thickness and section modulus respectively, as given in Ch. 3, Sec. 2.1

$$f_D = Z_R/Z_D$$

$$f_B = Z_R/Z_D$$

f<sub>s</sub> = f<sub>D</sub> for side shell area above neutral axis

= f<sub>B</sub> for side shell area below neutral axis

Where,

Z<sub>R</sub> = Rule mid-ship section modulus (cm<sup>3</sup>) as required by Ch.4.

Z<sub>D</sub>, Z<sub>B</sub> = Actual mid-ship section moduli (cm<sup>3</sup>) provided at deck and bottom respectively.

## **Section 2**

### **Structural Arrangement and Details**

#### **2.1 General**

- 2.1.1 The vessel's side shell may be stiffened longitudinally or vertically.
- 2.1.2 Where the side shell is stiffened longitudinally, the continuity of the side longitudinal within a distance of  $0.15D$  from bottom or from strength deck is to be maintained in accordance with Ch. 3, Sec. 5.1.1. The web frames are to be fitted with the bottom transverses or plate floors.
- 2.1.3 The position, shape and reinforcement of sea inlets or other openings in side shell are to be in accordance with the requirements of Ch. 4.
- 2.1.4 In the case of superstructures exceeding  $0.15 L$  in length and ending within  $0.5 L$  amidships, the side plating of the superstructures is to be increased by 25 percent in way of the break.
- 2.1.5 The thickness of the shell plating is to be increased locally by 50 percent in way of stern frame, propeller brackets and rudder horn, for reinforcements in way of anchor pockets, hawse pipes etc. refer to Ch. 13.
- 2.1.6 The weld connections are to comply with the requirements of Ch.14.

#### **2.2 Sheer strake**

- 2.2.1 The thickness of sheer strake as obtained from 4.1.3 is to be increased by 30 percent on each side of a superstructure end bulkhead located within  $0.5 L$  amidships if the superstructure deck is a partial strength deck.
- 2.2.2 Where a rounded sheer strake is adopted, the radius in general, is not to be less than 15 times the plate thickness.
- 2.2.3 Bulwarks are generally not to be welded to the top of the sheer strake within  $0.6L$  amidships.
- 2.2.4 Where the sheer strake extends above the deck stringer plate, the top edge of the sheer strake is to be kept free from notches and drainage openings if any, are to have smooth transition in the longitudinal direction.



### Section 3

#### Design Loads

#### 3.1 External pressure

3.1.1 The design pressure 'p' on side shell is to be taken as per Table 3.1.1

#### 3.2 Internal tank pressure

3.2.1 Where the side shell forms a boundary of a tank, the design pressure 'p' is to be taken as the greater of external pressure given by 3.1.1 and the internal tank pressure 'pi' given by 3.2.2.

3.2.2 The internal tank pressure 'pi' is to be taken as the greater of:-

$$p_i = 10 (h_s + 1) \text{ (kN/m}^2\text{)}, \text{ or}$$

$$= 6.7 h_p \text{ (kN/m}^2\text{)}$$

| Table 3.1.1  |                                      |   |  |
|--|--------------------------------------|---|--|
| Zone   |                                      | Design pressure 'p' $\text{pkN/m}^2$ ) <sup>a</sup> |  |
|  |                                      | For load points below the max. load waterline       | For load points above the max. load water line |
| 1  | $L \geq 60 \text{ (m)}$              | $10 h_o + (15 - h_o/T)$                             | $15 - 10h_o$                                   |
| 2  | $L \leq 20 \text{ (m)}$ <sup>b</sup> | $10 h_o + (9 - 3h_o/T)$                             | $9 - 10 h_o$                                   |
| 3  |                                      | $10 h_o + (5 - 2h_o/T)$                             | 5  |
| a) 'p' is not to be taken as less than $5(\text{kN/m}^2)$<br>b) For intermediate lengths (L) in Zone 1, the value of 'p' is to be linearly interpolated<br>$h_o$ = vertical distance (m), from the maximum load waterline to the load point. |                                      |   |  |

Where,

$h_s$  = The vertical distance (m) from the load point to the top of tank

$h_p$  = Vertical distance (m), from the load point to the top of air pipe.

For very large tanks which may be partially filled, sloshing pressure may have to be considered.

## Section 4

### Side Shell Plating and Stiffeners

#### 4.1 Side shell plating

4.1.1 The thickness 't' of side shell is not to be less than:-

$$t = (4 + 0.04 L) \sqrt{k} = t_c (\text{mm})$$

4.1.2 The side shell plating is also to comply with the requirements of buckling strength given in Ch. 3, Sec. 6.

4.1.3 The breadth of the sheer strake is not to be less than 100 D (mm)

Where the thickness of the strength deck plating is greater than that required for side plating, the sheer strake thickness is not to be less than the mean of the two values.

#### 4.2 Side shell longitudinal

4.2.1 The section modulus 'Z' of side longitudinal is not to be less than

$$Z = spl^2/12\sigma + Z_c (\text{cm}^3) \text{ Where,}$$

P = applicable design pressure at midpoint of the span (kN/m<sup>2</sup>).

$\sigma = (215 - 145 fs)/k$ , maximum 160/k (N/mm<sup>2</sup>) for side longitudinal at deck / bottom level within 0.4 L amidships.

= 160/k (N/mm<sup>2</sup>) at neutral axis within 0.4 L amidships.

= 160/k (N/mm<sup>2</sup>) within 0.1 L from ends and at the level of short superstructure decks.

Between the regions specified above  $\sigma$  ' may be obtained by linear interpolation.

#### 4.3 Mainframes

4.3.1 The section modulus 'Z' of the main frames bracketed at both ends as per 4.3.2 is not to be less than:-

$$Z = spl^2/2400 + Z_c (\text{cm}^3) \text{ and}$$

$$= 5.5 \sqrt{L \cdot k} (\text{cm}^3)$$

Where,

p = applicable design pressure at midpoint of the span or mean of the pressures at two ends, whichever is greater, (kN/m<sup>2</sup>).

4.3.2 Main frame brackets are to be as follows:-

Length of the bracket:-

- For upper bracket:- 70l(mm)

- For lower bracket:- 120

1(mm) Section modulus at end

(Including bracket):

- For upper bracket:-  $1.7Z(\text{cm}^3)$

- For lower bracket:- 2.0

$Z(\text{cm}^3)$  where,

$Z$  = section modulus of main frame as given in 4.3.1

Where the free edge of the bracket exceeds 40 times the bracket thickness, the brackets are to be flanged. The flange width is to be less 1/15 of the length of the free edge.

- 4.3.3 Brackets at ends of the main frame may be omitted provided the frame is carried through life supporting members and the section modulus obtained as per 4.3.1 is increased by 75 percent.

#### **4.4 Superstructure frames**

- 4.4.1 Superstructure frames located between the collision bulkhead and the after peak bulkhead are to have section modulus 'Z' not less than:-

$$Z = 0.005 S l^2 K (\text{cm}^3)$$

- 4.4.2 The lower end of the superstructure frame is to be connected to the bracket or frame below or else it is to be bracketed above the deck. The upper end is to be bracketed to the deck beam or longitudinal.

#### **4.5 Peak frames**

- 4.5.1 Vertical peak frames forward of the collision bulkhead and aft of the after peak bulkhead are to have section modulus 'Z' not less than.

$$Z = spl^2/1600 + Z_c(\text{cm}^3) \text{ and}$$

$$= 5.5 \sqrt{L.k} (\text{cm}^3) \text{ Where,}$$

$p$  = applicable design pressure ( $\text{kN/m}^2$ ), as given in Sec. 3

- 4.5.2 Peak frames are to be bracketed at top and bottom and in way of side stringers, the connection is to be provided adequate shear strength.

### **Section 5**

#### **Girders**

##### **5.1 General**

- 5.1.1 Web frames are to be fitted in way of hatch end beams and deck transverses.
- 5.1.2 In the engine room, web frames are to be fitted at the forward and aft end of the engine and every 5<sup>th</sup> frame in general. The section modulus 'Z' of the web frames and

side stringers is to be obtained as per 5.1.5 taking 'b' as the mean of the web frame or stringer spacing respectively, on either side. The depth of the webs and stringers are not to be less than 2.5 times the depth of the ordinary frames. Adequate deep beams are to be provided in line with the web frames.

5.1.3 In peak spaces, side stringers supporting vertical peak frames are normally to be fitted at every 2.6 (m). The section modulus 'Z' of the stringers is to be obtained as per Sec. 5.1.5. The stringers are to be supported by web frames.

5.1.4 The scantlings of simple girders and web frames supporting frames and longitudinal are to be in accordance with 5.1.5. The scantlings of the complex girder system are to be based on a direct stress analysis. The buckling strength of cross ties where fitted, is to comply with the requirements given in Ch. 3, Sec. 6.

5.1.5 The section modulus 'Z' of simple girders and web frames is not to be less than:-

$$Z = \frac{b p s^2 . 10^3}{m \sigma} + Z_c (\text{cm}^3) \text{ where,}$$

p = applicable design pressure (kN/m<sup>2</sup>), as given in Sec. 3.

m = 12 for continuous longitudinal girders with end attachments in accordance with Ch.3, Sec.5.

= 10 for other girders with end attachments in accordance with Ch.3, Sec. 5.

$\sigma = (190 - 45 f_s) \text{ k, max } 160/\text{k (N/mm}^2\text{), for continuous longitudinal girders within } 0.4 \text{ L amidships.}$

= 160/K (N/mm<sup>2</sup>) for longitudinal girders with 0. 1 L from ends and for web frames in general. Between the regions specified above, s may be obtained by linear interpolation.

5.1.6 The net cross sectional area 'A' of the girder web at ends is not to be less than

$A = (0.06 S b p k + 0.01 h t_c (\text{cm}^2))$  of stringers and upper ends of web frames

=  $0.08 S b p k + 0.01 h t_c (\text{cm}^2)$  for lower ends of the web frames.

Where,

h = girder height (mm).

5.1.7 Tripping brackets are to be fitted in accordance with the requirements given in Ch. 3, Sec. 4.4.4

**End of Chapter**

**Chapter 8**  
**Deck Structure**  
**Contents**

**Section**

- 1 General
- 2 Structural Arrangement and Details
- 3 Design Loads
- 4 Deck Plating and Stiffeners
- 5 Deck Girders and Pillars
- 6 Decks for Wheel Loading

**Section 1**  
**General**

**1.1 Scope**

- 1.1.1 The scantlings and arrangement of deck structure as defined in Ch.1, Sec. 2 are to comply with the requirements given in this Chapter.

**Symbols**

L, B, T, C<sub>b</sub>, k as defined in Ch. 1, Sec. 2

s = spacing of stiffeners, (mm),

l = span of stiffeners, (m)

b = spacing of girders, (m)

S = span of girders, (m).

T<sub>c</sub>, Z<sub>c</sub> = Corrosion addition to thickness and section modulus respectively as given in Ch.3, Sec. 2.1

$$f_D = Z_R/Z_D$$

where,

Z<sub>R</sub> = Rule mid-ship section modulus (cm<sup>3</sup>), as required by Ch. 4.

Z<sub>D</sub> = actual mid-ship section modulus (cm<sup>3</sup>), provided at deck calculated as per Ch. 4.

## Section 2

### Structural Arrangement and Details

#### 2.1 General

- 2.1.1 In tankers, the deck is normally to be stiffened longitudinally in the cargo tank region, however, where L does not exceed 75 (m), consideration may be given to transversely stiffened decks.
- 2.1.2 The continuity of the deck longitudinal is to be maintained in accordance with Ch.3, Sec. 5.1.1
- 2.1.3 The deck within the line of hatchway openings is preferably to be stiffened transversely or alternatively the arrangements are to provide adequate transverse buckling strength. Where the deck outside the line of hatchway openings is framed longitudinally, the transverse beams or buckling stiffeners between the hatchways are to extend at least upto the second longitudinal from the hatch side or equivalent.
- 2.1.4 In vessels with large hatch openings, the effective cross-sectional area of the deck between the hatchways is to be sufficient to withstand the transverse load acting on the vessel's sides.
- 2.1.5 The weld connectors are to comply with the requirements of Ch.14.
- 2.1.6 Hatchway corners are to be of streamlined, elliptical or circular shape as given in Ch. 4. Where shapes other than the streamlined shape or equivalent are adopted, insert plates are to be fitted at the hatch corners in strength deck. The insert plates are to be 25 percent thicker than the deck plating outside the line of hatchways and are to extend as shown in Fig. 2.1.6. The butts of insert plates are to be well clear of those in coming.

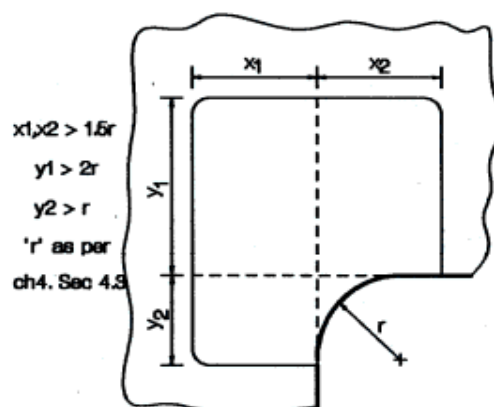


Fig.2.1.6 : Extent of insert plate

Figure

### 3.1 Weather deck

3.1.1 The design pressure 'p' on exposed decks is to be taken as:-

$$p = H_1 - 10 H_o \text{ (kN/m}^2\text{) minimum 5(kN/m}^2\text{) where,}$$

$H_o$  = vertical distance (m), from the maximum load waterline to the deck.

$H_1$  = as given in Table 3.1.1

| Table 3.1 |  |
|-----------|--|
| Zone      | $H_1$  |
| 1         | 9 for $L \leq 20$ (m)<br>9 + 0.15 (L-20) for $20 < L < 60$<br>15 for $L \geq 60$ (m) |
| 2         | 9  |
| 3         | 5  |

3.1.2 for decks subjected to cargo loading the design pressure to be taken as:-

$$p = 12.5 q \text{ (kN/m}^2\text{)}$$

Where 'q' is deck cargo loading \* t/m<sup>2</sup>)

3.1.3 For weather decks forming crowns of tanks, the design pressure 'p' is to be taken as the greater of that given by 3.1.1 and 3.3.1

### 3.2 Accommodation decks

3.2.1 The design pressure 'p' on accommodation decks is to be taken as:-

$$p = 4.5 \text{ (kN/m}^2\text{)}$$

3.2.2 For decks forming crowns of tanks the design pressure 'p' is to be taken as the greater of that given by 3.2.1 and 3.3.1

### 3.3 Decks forming tank boundaries

3.3.1 The design pressure 'p' for decks forming the bottom or crown of a tank may be taken as the greater of the following:-

$$p = 6.7 h_p \text{ (kN/m}^2\text{) or}$$

$$= 10 (h_s + 1) \text{ (kN/m}^2\text{)}$$

Where,

$h_p$  = vertical distance (m), from the deck to the top of air pipe

$h_s$  = vertical distance (m), from the deck to the top of the tank

## Section 4

### Deck plating and Stiffeners

#### 4.1 Deck plating

- 4.1.1 The thickness of the strength deck plating outside the line of hatchway openings is to be adequate to give the necessary hull section modulus and moment of inertia required by Ch. 4.
- 4.1.2 The thickness 't' of deck plating is not to be less than:-  
 $t = (t_o = 0.02L) \sqrt{k} + t_c(\text{mm})$  where,  
 $t_o = 5$  for strength decks and forecastle decks  
 $= 4.0$  for other decks.
- 4.1.3 The strength deck plating outside the line of hatchways is also to comply with the requirements of buckling strength given in Ch. 3, Sec. 6.
- 4.1.4 In way of ends of bridges, poops and forecastles, the thickness of the strength deck stringer strake is to be increased by 20 percent over four frame spaces fore and also aft of the end bulkheads.

#### 4.2 Deck stiffeners

- 4.2.1 The section modulus 'Z' of deck longitudinal is not to be less  $sp^2/12\sigma$  than:  $Z = Z_c(\text{cm}^3)$  where,  
 $p =$  applicable design pressure ( $\text{kN/m}^2$ ) as given in Sec. 3  
 $\sigma = (215 - 145f_D.f_Z)k$ , max.  $160/k$  ( $\text{N/mm}^2$ ) for strength deck and decks of long superstructures / deckhouses within  $0.4 L$  amidships.  
 $= (215 - 145f_D.f_Z)k$ , max.  $160/k$  ( $\text{N/mm}^2$ ) for continuous decks below strength deck within  $0.4 L$  amidships.  
 $= 160/k$  ( $\text{N/mm}^2$ ) within  $0.1 L$  from ends and for short decks.  
Elsewhere,  $\sigma$  may be obtained by linear interpolation.  
The longitudinal are also to comply with the requirements of buckling strength given in Ch.3, Sec. 6.
- 4.2.2 The section modulus 'Z' of transverse beams is not to be less than:-  
 $Z = sp^2/1600 + Z_c(\text{cm}^3)$  where,  
 $p =$  applicable design pressure ( $\text{kN/m}^2$ ) as given in Sec.3.



## Section 5

### Deck Girders and Pillars

#### 5.1 Girders

5.1.1 Deck girders and transverses are to be arranged in line with vertical members of scantlings sufficient to provide adequate support.

5.1.2 The scantlings of simple girders and transverses are to be accordance with 5.1.3. The scantlings of a complex girder system are to be based on a direct stress analysis.

5.1.3 The section modulus 'Z' of deck girders is not to be less than:-

$$Z = bpS^2 \cdot 10^2 / m\sigma + Z_c(\text{cm}^3) \text{ Where,}$$

p = applicable design pressure ( $\text{kN/m}^2$ ) as given in Sec. 3.

m = 12 for continuous longitudinal girders with end attachments in accordance with Ch.3

= 10 for other girders with end attachments in accordance with Ch.3

$\sigma = 190 - 145f_D \cdot F_Z/k$ , max  $160/k$  ( $\text{N/mm}^2$ ) for continuous longitudinal girders without 0.4 L amidships

=  $160/k$  ( $\text{N/mm}^2$ ) for longitudinal girders within 0.1 L from ends and for transverse girders in general.

Elsewhere,  $\sigma'$  may be obtained by linear interpolation.

5.1.4 The net cross sectional area 'A' of the girder web at ends is not to be less than:-

$$A = 0.07 \cdot S \cdot b \cdot p \cdot k + 0.01ht_c(\text{cm}^2) \text{ where,}$$

h = girder height (mm).

5.1.5 The girders are to be satisfactorily stiffened against buckling in accordance with the requirements given in Ch.3, Sec. 6. Tripping brackets are to be fitted in accordance with the requirements given in Ch.3, Sec. 4.4.4

#### 5.2 Cantilevers

5.2.1 The scantlings of cantilever beams and supporting frames will be specially considered.

#### 5.3 Pillars

5.3.1 The scantlings of the pillars are to be in accordance with the requirements of Ch.3, Sec. 6. Axial load, if any from pillars above is to be added to the load from deck girders.

The minimum wall thickness 't' mm+, of the tubular pillars is not to be less than :-

$$t = 4.5$$

$$+ 0.015d \quad \text{for } d < 300(\text{mm})$$

$$= 0.03d \quad \text{for } d \geq 300 (\text{mm})$$

Where,

$d$  = diameter of the pillar (mm).

- 5.3.2 Pillars are to be fitted in the same vertical line wherever possible, and arrangements are to be made to effectively distribute the load at the heads and heels. Where pillars support eccentric loads, they are to be strengthened for the additional bending moments imposed upon them. Doubling or insert plates are generally to be fitted at the head and heel of hollow pillars.
- 5.3.3 The pillars are to have a bearing fit and are to be attached to the head and heel plates by continuous welding.
- 5.3.4 Where the heels of hold pillars are not directly above the intersection of plate floors and girders, partial floors and intercostal girders are to be fitted as necessary to support the pillars. Lightening holes or manholes are not to be cut in the floors and girders below the heels of pillars.
- 5.3.5 Inside tanks, hollow pillars are not to be used and strengthening at the heels and heels of pillars is not to be obtained by means of doubling plates. Where hydrostatic pressure may give rise to tensile stresses in the pillars, their sectional area 'A' is not to be less than:-

$$A = 0.07. A_L.p \text{ (cm}^2\text{)}$$

Where,

$p$  = design pressure as given in Sec. 3, causing the tensile stress in pillar

$A_L$  = load area of deck ( $\text{m}^2$ ), being supported by the pillar.

## Section 6

### Decks for Wheel Loading

#### 6.1 General

- 6.1.1 Where it is proposed either to stow wheeled vehicles on the deck or to use wheeled vehicles for cargo handling, the requirements of this section are to be complied with in addition to those given in the preceding sections.
- 6.1.2 The requirements given below are based on the assumption that the considered element (Deck plating and / or stiffener) is subjected to one load area only, and that the element is continuous over several evenly spaced supports. The requirements for other loads and / or boundary conditions will be specially considered.

A "load area" is the tire print area of individual wheels; for closely spaced wheels it may be taken as the enveloped area of the wheel group.

- 6.1.3 The details of wheel loadings are to be forwarded by the vessel builder. These details are to include the proposed arrangement and dimensions of tyre prints, axle and wheel spacing, maximum axle load and tyre pressure.

## 6.2 Wheel loads

- 6.2.1 The pressure 'p' from the wheels on deck is to be

12.sw/n.a.b. taken as  $p = 10^6 \text{ (kN/m}^2\text{)}$

- 6.2.1.1 for stowed vehicles in sailing condition:-

and  $p = w/n.a.b \text{ (} 9.81 + 3W/\sqrt{W}\text{)} 10^6 \text{ (kN/m}^2\text{)}$

- 6.2.1.2 For cargo handling vehicles in harbor condition

Where,

W = maximum axle load, (t). For fork lift trucks, the total weight is to be taken as the axle load.

n = number of "load areas" per axle

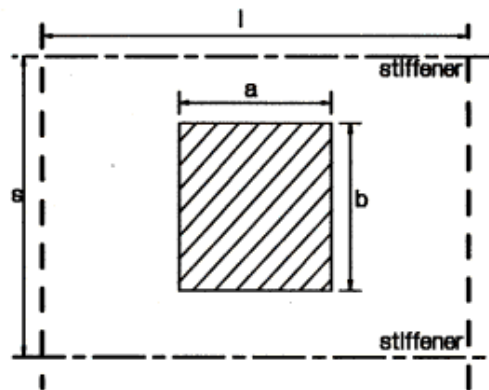


Fig.6.2.1 : Plate panel and load area dimensions

a = extent (mm), of the load area parallel to the stiffener (see Fig. 6.2.1)

b = extent (mm), of the load area perpendicular to the stiffener (see Fig. 6.2.1)

## Figure

## 6.3 Deck plating

- 6.3.1 The thickness 't' of deck plating subjected to wheel loading is not to be less than:-

$$t = C_1 f_a \sqrt{\frac{c_2 b s p k \cdot 10^{-3}}{m}} + t_c \text{ (mm) where,}$$

$f_a = (1.1 - 0.25 s/l)$  for  $s \leq 1$ , however need not be taken as greater than 1.0

a, b, s, l = deck panel dimensions (mm) (see Fig. 6.2.1)

$c_1 = 0.137$  in general for sailing conditions

= 0.127 in general harbor conditions

= As per Table 6.3.1 for upper deck within 0.4 L amidships.

| <b>Table 6.3.1 : c1 values for upper deck plating within 0.4 L amidships</b> |                           |                          |
|--|---------------------------|--------------------------|
| <b>Framing system</b>  | <b>Sailing conditions</b> | <b>Harbor conditions</b> |
| Longitudinal   | 0.145                     | 0.130                    |
| Transverse   | 0.180                     | 0.145                    |

For upper deck plating between 0.4 L amidships and 0.1 L from ends,  $C_1$  is to be varied linearly.

$$c2 = 1.3 \frac{4.2}{(a/s + 1.8)^2},$$

However, need not be taken as greater than 1.0

$$m = \frac{38}{(b/s)^2 - 4.7(b/s) + 6.5} \text{ for } b \leq S)$$

## 6.4 Deck stiffeners

- 6.4.1 The section modulus 'Z' of deck beams and longitudinal subject to wheel loadings is not to be less than:-

$$Z = \frac{c_s \cdot a \cdot b \cdot p \cdot 10^{-6}}{m \sigma} + Z_c (\text{cm}^3)$$

Where,

$c3 = (1.15 - 0.25 b/s)$  for  $b \leq s$ , however need not be taken as greater than 1.0

$$m = \frac{r}{(a/l)^2 - 4.7(b/s) + 6.5}$$

$r = 29$  for continuous stiffeners supported at girders

= 38 when the continuous stiffeners can be considered as rigidly supported at girders against rotation.

$\sigma = 160/k$  ( $\text{N/mm}^2$ ) in general, for sailing conditions

=  $180/k$  ( $\text{N/mm}^2$ ) in general, for harbor conditions

= As per Table 6.4.1 for deck longitudinal between 0.4 L amidships and 0.1 L from ends,  $\sigma$  is to be varied linearly.

| <b>Table 6.4.1 – <math>\sigma</math> Values longitudinal within. 0.4 L amidships</b> |                                     |
|--|-------------------------------------|
| <b>Conditions</b>  | <b>(<math>\text{N/mm}^2</math>)</b> |
| Sailing  | $(215 - 145 f_D \cdot f_Z)k$        |
| Harbor   | $(225 - 90)$                        |

## 6.5 Deck girders

- 6.5.1 The scantlings of girders will be specifically considered based on the most severe condition of moving or stowed vehicles. Also see Sec. 6.1.3

**End of Chapter**

**Chapter 9****Bulkheads****Contents****Section**

- 1 General
- 2 Subdivision and Arrangement
- 3 Structural Arrangement and Details
- 4 Design Loads
- 5 Plating and Stiffeners
- 6 Girders

**Section 1****General****1.1 Scope**

- 1.1.1 The requirements of this chapter cover the arrangement and scantlings of watertight and deep tank bulkheads.
- 1.1.2 The requirements also cover the non-watertight bulkheads and shaft tunnels.

**1.2 Statutory requirements**

- 1.2.1 Where applicable, the number and disposition of bulkheads are to be arranged to meet the requirements for subdivision, flood ability and damage stability in accordance with the requirements of the local or National Statutory Authority of the country in which the vessel is registered.

**1.3 Symbols**

L, B, T, C<sub>b</sub>, k as defined in Ch. 1, Sec. 2

s = spacing of stiffeners (mm)

l = span of stiffeners (m)

b = spacing of girders (m)

S = span of girders (m)

t<sub>c</sub>, Z<sub>c</sub> = corrosion additions to thickness and section modulus respectively as given in Ch.3, Sec. 2.1.

$f_D = Z_R/Z_D$

$f_D = Z_R/Z_D$

Where,

Z<sub>R</sub> = Rule mid-ship section modulus (cm<sup>3</sup>) as required by Ch. 4.

$Z_D, Z$  = Actual mid-ship section moduli in ( $\text{Cm}^3$ ) provided at deck and bottom respectively calculated as per Ch. 4

$f_s = f_D$  for side shell area above neutral axis

$f_s = f_B$  for side shell area below neutral axis

## Section 2

### Subdivision and Arrangement

#### 2.1 Number of bulkheads

2.1.1 The following transverse watertight bulk-heads are to be fitted in all vessels:-

- A collision bulkhead;
- An aft peak bulkhead;
- A bulkhead at each end of the machinery space.

In vessels with machinery aft, the aft peak bulkhead may form the aft boundary of the machinery space. Additional transverse watertight bulkheads are to be fitted to ensure adequate transverse strength.

2.1.2 The ordinary transverse watertight bulk-heads in the holds should be spaced at reasonably uniform intervals. Where non uniform spacing is unavoidable and the length of a hold is unusually large, the transverse strength of the vessel is to be maintained by providing additional web frames, increased framing. etc.

#### 2.2 Position and height of bulkhead

2.2.1 The collision bulkhead is to be fitted at a distance of 0.04 L to 0.1 L from the F. P. Any recesses of steps in collision bulkheads are to fall within the limits.

2.2.2 Consideration will however be given to proposals for the collision bulkhead positioned aft of the limits given in 2.2.1, provided that the application is accompanied by calculations showing that with the vessel fully loaded to maximum draught on even keel, flooding of space forward of the collision bulkhead will not result in any part of the main deck becoming submerged, nor result in any unacceptable loss of stability.

2.2.3 All vessels are to have an after peak bulkhead generally enclosing the stern tube and rudder trunk in a watertight compartment, in twin screw vessels where the bossing ends forward of the after peak bulkhead, the stern tubes are to be enclosed in suitable watertight spaces.

2.2.4 The watertight bulkheads are in general to extend to the uppermost continuous deck.

2.2.5 For passenger vessels the number and position of the bulkheads will normally be governed by the requirements of trim and stability in damaged condition given in Pt.5, Ch.4.

### **2.3 Openings in watertight bulkheads and closing appliances**

2.3.1 Doors, manholes, permanent access openings or ventilation ducts are not to be cut in the collision bulkhead below the uppermost continuous decks.

2.3.2 Openings may be accepted in other watertight bulkheads provided that number and the size of openings is kept to a minimum compatible with the design and proper working of the vessel. Where penetrations of watertight bulkheads are necessary for access, piping, are to be made to maintain the watertight reinforcements re to be provided to ensure that the strength is at least equal to that of the unpierced bulkhead.

### **2.4 Cofferdams**

2.4.1 Cofferdams are to be provided between the following spaces to separate them from each other:-

- Tanks for fuel oil or lubricating oil
- Tanks for edible oil
- Tanks for fresh water and feed water.

2.4.2 Tanks for lubricating oil are also to be separated by cofferdams from those carrying fuel oil. However, these cofferdams need not be fitted provided that the common boundaries have full penetration welds and the head of oil is generally not in excess of that in the adjacent lubricating oil tanks.

## **Section 3**

### **Structural Arrangement and Details**

#### **3.1 General**

3.1.1 Oil fuel or oil carried as cargo in the deep tanks is to have a flash point of 60°C and above in closed up test. Where tanks are intended for other liquid cargoes of a special nature the scantlings and arrangements will be considered in relation to the nature of the cargo.

3.1.2 The continuity of bulkhead longitudinal within a distance of 0.15 D from the bottom or the strength deck is to be maintained in accordance with Ch.3, Sec. 5.1.1

3.1.3 Carlings, girders or floors are to be fitted below the corrugated bulkhead at their supports. These supporting members are to be aligned to the face plate strips of the corrugations.

3.1.4 The weld connections are to comply with the requirements of Ch. 16.

### **3.2 Wash bulkheads**

3.2.1 A centerline wash bulkhead is to be fitted in peak spaces used as tanks, where the breadth of the tank exceeds 0.5 B and also in deep tanks used for fuel oil extending from side to side.

3.2.2 The area of perforations is generally to be between 5% to 10% of the total area of bulkhead. The plating is to be suitably stiffened in way of the openings.

### **3.3 Supporting bulkheads**

3.3.1 Bulkheads or parts thereof supporting deck structure are also to be designed as pillars. The permissible axial loads and buckling strength are to be calculated in accordance with Ch.3, Sec.6. In calculating sectional properties the width of attached plating is not to be taken in excess of 40 times the plate thickness. Also see Ch. 8, Sec. 5.1.1.

## **Section 4**

### **Design Loads**

#### **4.1 Watertight bulkhead loads**

4.1.1 The design pressure 'p', for ordinary watertight bulkheads is given by:-

$$p = 10h(\text{kN/m}^2)$$

Where,

h = the vertical distance (m) from the load point to the uppermost continuous deck.

4.1.2 For bulkheads bounding cargo spaces intended to carry dry bulk cargoes, the design pressure 'p' is to be taken as the higher of that given in 4.1.1 and the pressure due to bulk cargo as given below:-

$$p = 12.5 C \rho h_c(\text{kN/m}^2)$$

Where

$\alpha$  = angle made by the panel under consideration with the horizontal plane (deg.)  $\delta$

= angle of repose of cargo (deg.) not to be taken greater than the following

- 20° for high bulk cargo (e.g. coal, grain)

- 25° for bulk cement cargo

- 35° for heavy bulk cargo (e.g. ore)



$h_c$  = vertical distance (m), from the load point to the mean horizontal plane corresponding to actual volume of cargo being considered.

$\rho$  = vertical distance (m), from the load point to the mean horizontal plane corresponding to actual volume of cargo being considered.

$\rho$  = density of cargo ( $t/m^3$ ).

For vessels designed to carry heavy bulk cargoes which are also required to carry lighter cargoes, the pressure 'p' based on maximum mass of cargo to be carried in the hold and fitted up to the top of hatch coaming would also require to be considered.

## **4.2 Tank bulkhead loads**

4.2.1 The design pressure 'p' for tank bulkheads are normally to be taken as the greater of

$$p = 12.5 h_s (\text{kN/m}^2)$$

$$= 6.7 h_p (\text{kN/m}^2)$$

$$= 10 (h_s + 1) (\text{kN/m}^2)$$

Where,

$h_p$  = vertical distance (m) from the load point to the top of the air pipe.

$h_s$  = vertical distance (m) from the load point to the top of the tank or hatchway.

For very large tanks which may be partially filled, sloshing pressures may have to be considered.

4.2.2 The pressure 'p' on girder web panels in cargo tanks or ballast tanks is not to be taken as less than 20 ( $\text{kN/m}^2$ ).

## **4.3 Wash bulkheads loads**

4.3.1 The design pressure 'p' for wash bulkheads may be taken as 50% of that for boundary bulkhead in the same location.

# **Section 5**

## **Plating and Stiffeners**

### **5.1 Bulkhead plating**

5.1.1 The thickness 't' of the bulkhead plating is not to be less than the minimum thickness given in 5.1.2 nor less than

$$t = 15.8s \frac{\sqrt{p}}{\sigma} \times 10^{-3} + t_c (\text{mm})$$

where,

p = applicable design pressure as given in Sec. 4

$\sigma$  = as per Table 5.1.1 for longitudinal bulkheads.

= 160/k for transverse tank bulkheads and collision bulkhead;

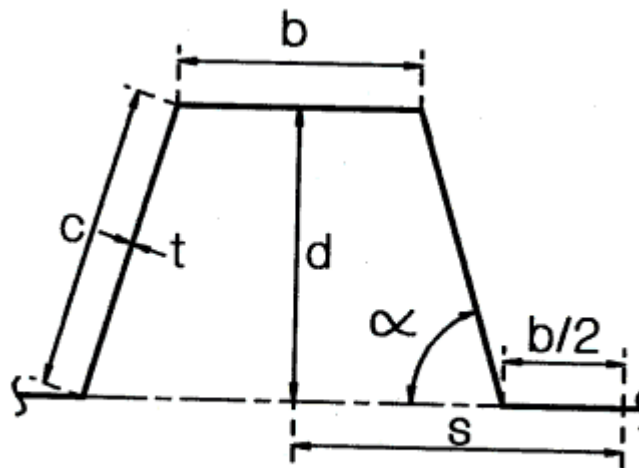
= 220/k for ordinary transverse watertight bulkheads.

= 190/k for transverse dry bulk cargo bulkheads

5.1.2 The minimum thickness requirement of the bulkhead plating is given by

$$T = (4.0 + 0.01L) + t_c(\text{mm})$$

5.1.3 The plate thickness of corrugated bulk head is not to be less than that required according to 5.1.1 and 5.1.2. The spacing 's' to be used in the calculating of the plating thickness is to be taken as the greater of 'b' or 'c' where 'b' and 'c' are indicated in Fig. 5.1.3.



**Fig.5.1.3 : Corrugated bulkhead**

**Figure**

For built up corrugation bulkheads, where the thickness of the flange and web are different, the thickness of the wider plating is also not to be less than:-

| <b>Table 5.1.1 : <math>\sigma</math> values for longitudinal bulkhead plating</b> |                |                 |                             |  |
|---|----------------|-----------------|-----------------------------|--|
| Region  | Framing system | At neutral axis | At strength deck or bottom  | Between neutral axis and strength deck or bottom |
| 0.4 L amidships   | Vertical       | 140/k           | (175-130 fs)k<br>max. 120/k | To be obtained by linear interpolation           |

|                           |   |       |   |  |
|---------------------------|---|-------|---|--|
|                           | Longitudinal  | 160/k | (1850-105 f <sub>s</sub> )k<br>max. 120/k | To be obtained<br>by linear<br>interpolation |
| Within 0.1 L<br>from ends | 160/k   | 160/k | 160/k                                     |  |
| Elsewhere                 | to be obtained by linear interpolation between allowable values at regions specified above. |       |   |  |

$$t = \sqrt{\frac{s^2 \cdot p}{2\sigma} - (t_a - t_c)^2} + t_c \text{ (mm)}$$

Where,

$t_a$  = thickness of adjacent plating (mm) not to be taken greater than  $t$ .

5.1.4 The longitudinal bulkhead plating within 0.1 D from bottom or strength deck is also to comply with the requirements of buckling strength given in Ch.3, Sec. 6.

5.1.5 In way of stern tubes, doubling plate of same thickness as the corresponding strake is to be fitted, or the strake thickness is to be increased by at least 60 percent.

## 5.2 Longitudinal

5.2.1 The section modulus of continuous longitudinal stiffeners and corrugations not to be less than:-

$$Z = \frac{s p l^2}{m \sigma} + Z_c \text{ (cm}^3\text{)}$$

Where,

$p$  = applicable design pressure given in Sec. 4

$m = 12$

$\sigma = (215 - 145 f_s)/k$ , max. 160/k (N/mm<sup>2</sup>) at deck/bottom level within 0.4 L amidships

= 160/k at neutral axis within 0.4 L amidships.

= 160/k for longitudinal within 0.1 L from ends.

For longitudinal between the regions specified above  $\sigma$  may be obtained by linear interpolation.

5.2.2 The thickness of the web and flange is not to be less than the minimum plating thickness requirements stipulated in 5.1.2.

5.2.3 The rule section modulus of a corrugated bulkhead elements is to be obtained according to 5.2.1 taking 's' as shown in Fig. 5.1.3.

- 5.2.4 The actual section modulus of a corrugated bulkhead element may be obtained in accordance with the following:-

$$Z_{\text{actual}} = \frac{t.d(b+c/3)}{2000} (\text{cm}^3)$$

Where,

Where, t, d, b and c (mm), are as shown in Fig. 5.1.3.

### 5.3 Vertical and transverse stiffeners on tank bulkheads, collision bulkheads, dry bulk cargo bulkheads and wash bulkheads.

- 5.3.1 The section modulus of bulkhead stiffeners is not to be less than:-

$$Z = spl^2/m\sigma + Z_c(\text{cm}^3) \text{ where,}$$

p = applicable design pressure (kN/m<sup>2</sup>) given in Sec. 4.

m = 10 for transverse stiffeners and vertical stiffeners which may be considered fixed at both ends.

= 7.5 for vertical stiffeners simply supported at one of both ends.

= 10 for horizontal corrugation fixed at ends

= 13 for fixed upper end of vertical corrugation

= 20 for non-fixed upper end of vertical corrugation

= 10 for lower end of vertical corrugation

$\sigma = 160/k$  for tank bulkhead and collision bulkhead

=  $210/k$  for dry bulk cargo bulkheads.

- 5.3.2 The thickness of web and flange is to be as required in 5.1.2.

- 5.3.3 Actual section modulus of corrugation is to be obtained as per 5.2.4.

- 5.3.4 Brackets are normally to be fitted at the ends of non-continuous stiffeners. Where stiffeners are sniped at the ends, the thickness of plating supported by the stiffeners is not to be less than:-

$$t = 0.0395 \sqrt{[(1-0.0005s)s.p.k]} + t_c(\text{mm})$$

### 5.4 Vertical and transverse stiffeners on ordinary watertight bulkheads

- 5.4.1 The section modulus of bulkhead stiffeners is not to be less than

$$Z = spl^2/m\sigma$$

Where,

p = applicable design pressure given in Sec.4

m = 16 for stiffeners fixed at both ends.

= 12 for stiffeners fixed at one end (lower end in case of vertical stiffeners) and simply supported at the other end.

= 8 for stiffeners simply supported at both ends.

$\sigma = 220/k$

- 5.4.2 The thickness of web and flange is to be as required in 5.1.2. For sniped ends, the thickness of bulkhead plating is to be as per 5.3.4.
- 5.4.3 Actual section modulus of corrugations is to be obtained as per 5.2.4.

## Section 6

### Girders

#### 6.1 General

- 6.1.1 Bulkhead stringers and deep transverses are to be arranged in line with other primary supporting structure to the adjoining deck, side shell and bottom so as to facilitate the formation of continuous ring structures. Otherwise equivalent scarphing agreement is to be provided.
- 6.1.2 The section modulus requirement 'Z' of simple girders is not to be less than:-

$$Z = \frac{b.p.S^2 \times 10^3}{m\sigma} + Z_c \text{ [cm}^3\text{]}$$

Where,

m = 12 for continuous longitudinal girders with end attachments in accordance with Ch.3, Sec. 5.

= 10 for other girders with end attachments in accordance with Ch. 3, Sec. 5.

$\sigma = (190-45f_s)$ , max  $160/k(\text{N/mm}^2)$ , for continuous longitudinal girders within 0.4 L amidships.

=  $160/k (\text{N/mm}^2)$  for continuous longitudinal girders within 0.1 L from ends and for vertical or transverse girders on tank and collision bulkheads.

=  $210/k$  for vertical and transverse girders, in general.

For continuous longitudinal girders between the regions specified above,  $\sigma'$  may be obtained by liner interpolation.

- 6.1.3 The depth of the girders should not be less than 2.5 times the depth of the cutout (if any) for the passage of continuous stiffeners. The net cross sectional area 'A' of the girder web at ends is not to be less than.

$$A = CkSbp + 0.01 d_w t_c \text{ (cm}^2\text{)}$$

Where,

C = 0.060 for tank collision bulkheads

C = 0.045 for other watertight bulkheads

$d_w$  = depth of web (mm).

However, for lower end of vertical girders value of C to be taken as 0.08 and 0.06 respectively.

- 6.1.4 Tripping brackets are to be fitted in accordance with the requirements given in Ch.3, Sec. 4.

**End of Chapter**

**Chapter 10**  
**Superstructures, Deckhouses and Bulwarks**  
**Contents**

**Section**

- 1 General
- 2 Scantling
- 3 Structural Arrangement and Details
- 4 Bulwarks and Guard Rails

**Section 1**  
**General**

**1.1 Scope**

- 1.1.1 The scantlings of the bulwarks and of the exposed bulkheads of the superstructures and deckhouses are to comply with the requirements of this chapter. The scantlings of the decks of the superstructures and deckhouses are to be in accordance with the requirements of Ch. 8, and those of the sides of the superstructures are to be in accordance with the requirements of Ch. 7.

**1.2 Definitions**

- 1.2.1 For definitions of the terms 'Superstructure' and 'Deckhouse' refer to Ch. 1
- 1.2.2 The lowest tier is normally the tier that is directly situated on the deck to which the rule depth 'D' is measured or on superstructures which are less than 1.8 (m) in height.

**1.3 Symbols**

- 1.3.1 L and k as defined in Ch. 1, Sec. 2.  
s = spacing of stiffeners (mm) l =  
Span of stiffeners (m).

**Section 2**  
**Scantlings**

**2.1 End of bulkhead and exposed sides of deck houses**

- 2.1.1 The thickness 't' of steel plating of the fronts, sides and aft ends of deckhouses and the front and aft ends of superstructures is not to be less than:-  
$$t = (0.004 s + 2.5) \sqrt{k} - \text{for lowest tier}$$

$$= (0.004 s + 1.5) \sqrt{k} - \text{for upper tiers}$$

- 2.1.2 The section modulus  $Z$  of stiffeners on fronts, sides and aft ends of deck houses and the front and ends of superstructures is not to be less than:-

$$Z = 3.6 s l^2 \times 10^{-3} \cdot k (\text{cm}^3) - \text{for uppermost tier}$$

$l$  is not to be taken less than 2.0 (m).

When a multiple tier erection is fitted, the section modulus of stiffeners on lower tiers is to be increased at the rate of 15% per tier fitted above the tier under consideration.

- 2.1.3 The upper end of stiffeners on all erections are to be bracketed to the deck beams or longitudinal and the lower end is to be welded to the deck below.

## **2.2 Protected machinery casings**

- 2.2.1 The thickness of plating is not to be less than:-

$$t = (0.003 S + \sqrt{k}) (\text{mm})$$

- 2.2.2 The section modulus ' $Z$ ' of stiffeners is not to be less than:-

$$Z = 0.003 s l^2 \sqrt{k} (\text{cm}^3)$$

Where,  $l$  is not to be taken less than 2.0 (m).

- 2.2.3 Casings supporting one or more decks above are to be adequately strengthened.

## **Section 3**

### **Structural Arrangement and Details**

#### **3.1 Structural continuity**

- 3.1.1 Adequate transverse strength is to be provided to the deckhouses and superstructures by means of transverse bulkheads, girders and web frames.
- 3.1.2 The front end and the after end bulkheads of large superstructures and deckhouses are to be effectively supported below by a transverse bulkhead or by a combination of partial bulkheads, girders and pillars. Similarly, the exposed sides of various tiers of erections are to be supported by bulkheads, girders or carlings below.
- 3.1.3 All openings cut on the sides are to be substantially framed and have well rounded corners.
- 3.1.4 At the ends of superstructures, which have no set-in from the vessels' side, the side plating is to extend beyond the ends of the superstructures, and is to be gradually reduced in height down to the sheer strake. The extended plating is to be adequately stiffened, particularly at its upper edge.

## **Section 4**

### **Bulwarks and Guard Rails**

#### **4.1 General requirements**

- 4.1.1 Bulwarks or guard rails are to be provided on the exposed parts of the free board and superstructure decks and also on all upper deck spaces normally accessible to crew and passengers. The height of the bulwarks or guard rails measured above the sheathing, if any, should not be less than the following:-

For all passenger vessels:-

- For all Zones : 900(mm)

For all other vessels:-

- 1 For Zone 1 : 900(mm)
- 2 For Zone 2 : 600(mm)
- 3 For Zone 3 : 300(mm)

Consideration will be given to cases where this height would interfere with the normal operation of the vessel.

- 4.1.2 Bulwarks or guard rails as required by 4.1.1. may be dispensed with in way of hatch side coamings fitted with suitable handrails.
- 4.1.3 Where bulwarks on weather portion of freeboard decks or superstructure decks from wells, provision is to be made for rapidly freeing the decks of water.

#### **4.2 Bulwark construction**

- 4.2.1 Bulwarks are to be stiffened at the upper edge by a strong rail section and supported by stays from the deck, spaced not more than 2.0 (m) apart. Where bulwarks are cut in way of a gangway or other openings, stays of increased strength are to be fitted at the ends of the openings.

Bulwark stays are to be supported by, or are to be in line with, suitable under deck stiffening, which is to be connected by double continuous fillet welds in way of the bulwark stay connection.

Bulwarks are to be adequately strengthened in way of eye plates for cargo gear. In way of the mooring pipes, the plating is to be increased in thickness and also adequately stiffened.

- 4.2.2 Bulwarks are generally not to be welded to the top of the sheer strake within 0.6 L amidships and so arranged as to ensure their freedom from main structural stresses.



**4.3 Bulwarks scantlings**

- 4.3.1 The thickness of the bulwark plating is not to be less than 4.0 (mm).
- 4.3.2 The section modulus 'Z' at the bottom of the bulwark stay is not to be less than:-

$$Z = (33 + 0.44 L)h^2 s(\text{cm}^3)$$

where,

h = height of bulwark (m)

s = spacing of bulwark stays (m)

In the calculation of section modulus 'Z' only the material connected to the deck is to be included. The contribution from bulwark plating and / or stay flange may be considered depending upon the construction details.

**4.4 Guard rails**

- 4.4.1 The guard rails are to be supported by stanchions fitted not more than 3.0 (m) apart; At least every third stanchion is to be supported by a bracket or stay.
- 4.4.2 Lengths of chain may be accepted in lieu of guard rails if they are fitted between two fixed stanchions and / or bulwarks.
- 4.4.3 The clear opening below the lowest course of the guard rails is not to exceed 230 (mm).

**End of Chapter**

## **Chapter 11**

### **Openings and Closing Appliances, Ventilators, Air Pipes and Discharges**

#### **Contents**

#### **Section**

- 1 General
- 2 Hatch Coaming
- 3 Hatch Covers
- 4 Miscellaneous Openings
- 5 Ventilators
- 6 Air and Sounding Pipes
- 7 Scuppers and Sanitary Discharges

#### **Section 1**

##### **General**

#### **1.1 Scope**

- 1.1.1 This chapter applies to all vessel types in general. Additional requirements pertaining to special vessels types are given in Pt. 5.
- 1.1.2 The requirements of National or local authorities should also be applied, where relevant.
- 1.1.3 For the purpose of this section weather tightness of hatch covers means that closing appliances do not permit entry of water into the vessel which may prejudice the safety of the vessel under the navigational condition envisaged.

#### **Section 2**

##### **Hatch Coamings**

#### **2.1 Coaming heights**

- 2.1.1 The height of cargo hatch coamings above deck is to be not less than 300 (mm) for Zones 1 and 2 and 200 (mm) for Zone 3.  
In addition, the distance of coaming top above load water line is to be not less than given in Table. 2.1.1.

## 2.2 Hatch coaming construction

- 2.2.1 Hatch side coamings are to extend to the lower edge of the deck beams. Side coamings not forming a part of continuous girders, are to extend two frame spaces beyond the hatch ends below the deck.

| <b>Table 2.1.1 : Height of hatch coamings (mm)</b> |               |               |               |
|--|---------------|---------------|---------------|
|  | <b>Zone 1</b> | <b>Zone 2</b> | <b>Zone 3</b> |
| With weather tight hatch cover <sup>1)</sup>       | 1000          | 600           | 300           |
| Without water tight hatch cover                    | 1700          | 1000          | 500           |
| Note 1) See. 1.1.3                                 |               |               |               |

- 2.2.2 Hatch end coamings when not in line with the deck transverses are to extend below the deck, at least three longitudinal frame spaces beyond the side coamings.
- 2.2.3 Continuous hatchway coamings or coamings forming an effective part of the deck girder system are to be made from steel of same tensile strength as that of the deck plating.
- 2.2.4 If the junction of the hatch coamings forms a sharp corner, the side and end coamings are to be extended in the form of tapered brackets in longitudinal and transverse direction respectively.
- 2.2.5 Extension brackets or rails arranged approximately in line with the cargo hatch side coamings and intended for the stowage of steel hatch covers are not to be welded to deckhouse, mast house or to each other unless they form a part of the longitudinal strength members.

## 2.3 Coamings scantlings

- 2.3.1 The scantlings of hatch coaming plating and stiffeners are to be not less than that required for the adjacent deck.
- 2.3.2 Hatchway coamings 300 (mm) and above are to be stiffened in their upper edge. Coaming stays are to be fitted at spacing of not more than 3.0 (m). The stays are to end on stiffened plating. The coamings are to be satisfactorily stiffened against buckling.

### Section 3

#### Hatch Covers

#### 3.1 General

3.1.1 Hatch covers, where fitted, may be of the types a) to e) as described below.

##### **Hatch cover types:-**

- 'a': Steel plated cargo hatch covers stiffened by webs or stiffeners and secured by clamping devices. Weather tightness is to be ensured by means of gaskets. Hatch covers used for holds containing liquid cargoes are also included in this category.
- 'b': Steel plated pontoon type cargo hatch covers with internal webs and stiffeners extending over the full width of the hatchway. Weather-tightness is to be achieved by tarpaulins.
- 'c': Wood or steel hatch covers used in conjunction with the portable beams. Weather tightness to be obtained by tarpaulins.
- 'd': Access hatch covers for cargo oil tanks and adjacent spaced. The hatch covers are to be of steel and gasketed.
- 'e': Access hatch covers other than 'd'. The covers are to be of steel or wood and weather tight. Escape hatches are to be operable from both sides.

3.1.2 Materials for steel hatch covers are to satisfy the requirements of hull structural steel. Where other approved materials are used, equivalent strength and stiffness are to be provided.

#### 3.2 Design loads

3.2.1 The design weather load on the weather deck hatch covers is to be taken as:-

$$p = H_1 - 10 h_o (\text{kN/m}^2), \text{ minimum } 3 (\text{kN/m}^2)$$

where,

$h_o$  = Vertical distance (m) from the maximum load waterline to the top of hatch covers.

$H_1$  = as given in Table 3.2.1.

| Table 3.2.1 |  |
|-------------|--|
| Zone 1      | $H_1$  |
| 1           | 9 for $L \leq 20$ (m)<br>$9 + 0.15 (L-20)$ for $20 < L < 60$<br>15 for $L \geq 60$ m |

|   |   |
|---|---|
| 2 | 0 |
| 3 | 5 |

3.2.2 For hatch covers subjected to cargo loading the design pressure is to be taken as:-

$$p = 12.5 q (\text{kN/m}^2)$$

Where,

$q$  = specified cargo loading ( $\text{t/m}^2$ ) on the hatch cover.

3.2.3 The design internal pressure on hatch covers above tanks are to be determined as per the design pressure on deck structure given in Ch.8.

### 3.3 Hatch cover plating

3.3.1 The thickness of steel hatch cover plating is not to be less than:-

$$t = 15.8s \sqrt{p/\sigma} \times 10^{-3} + t_c (\text{mm}), \text{ or}$$

3 (mm) whichever is greater

where,

$p$  = design pressure as per 3.2

$$= 160/k (\text{N/mm}^2).$$

Hatch covers of G. I. sheet and other material will be specially considered.

3.3.2 The plating of hatch covers acting as compression flanges for the hatch cover stiffeners and girders is to be effectively stiffened against buckling.

In the middle part of the simple support span the critical buckling stress  $S_c$  is to be such that:-

$$\sigma_c \geq 1.15 \sigma_b (\text{N/mm}^2)$$

where,

$\sigma_b$  = calculated bending stress in the compression flange corresponding to the design load as given in e.2.

$\sigma_c$  = the critical buckling stress as per Ch.3, Sec. 6.

### 3.4 Stiffeners and girders

3.4.1 The section modulus of the stiffeners and girders is not to be less than following:-

$$Z = 6.25 spl^2/m (\text{cm}^3)$$

Where,

$l$  = the member span between effective supports (m)

$s$  = the member spacing (m)

$m$  = 8 for members simply supported at ends

= 12 for members which can be considered as fixed at both ends.

The moments of inertia of stiffeners and girders is not to be less than:

$$I = 2.1 ZI \text{ (cm}^4\text{)}$$

For other materials the requirement will be specially considered.

- 3.4.2 For covers above cargo and ballast tanks, fillet welds on tank side are to be double continuous.

### **3.5 Hatch cover edges**

- 3.5.1 The cover edges are to be adequately stiffened to withstand the forced imposed upon them during opening and closing of the hatches.

### **3.6 Wooden hatch covers**

- 3.6.1 Wooden hatch cover planks are to have a finished thickness not less than  $1/24^{\text{th}}$  of the unsupported span, with a minimum of 20 (mm). The planks of wood covers are to be connected at their underside by cross planks spaced not more than 1.5 (m).
- 3.6.2 The ends of all wooden hatch covers are to be protected by encircling with galvanized steel bands.

### **3.7 Portable hatch beams**

- 3.7.1 The section modulus and the moment of inertial of the portable hatch beams stiffened at their upper and lower edges by continuous flat bars are to satisfy the requirements of 3.4.
- 3.7.2 Carriers or sockets, or other suitable arrangements are to be provided as means of the efficient fitting and secured of portable hatch beams.
- 3.7.3 Sliding hatch beams are to be provided with an efficient device for locking them in their correct fore and aft position when the hatchway is closed.

### **3.8 Direct calculations**

- 3.8.1 Hatch covers of special construction and arrangement e.g. covers designed and constructed as a grillage, covers supported along more than two opposite edges and covers supporting other covers, may require submission of direct strength calculating taking into account the arrangement of stiffeners and the supporting members.

### **3.9 Hatch cover securing arrangement**

- 3.9.1 The gaskets and the securing arrangements are to be designed for the expected relative movement between cover and coaming or special devices are to be fitted to restrict such movement.
- 3.9.2 Securing arrangements together with suitable gasketing material are to ensure weather tightness of the covers to the satisfaction of the surveyors.

- 3.9.3 The gasket material is to be satisfactory air, sea water and if necessary oil resistant quality. It is to be effectively secured along the edges of the covers in a manner as to ensure that the forces from the hatch covers or cargo stowed on top of the hatch covers are transferred to the coaming or to the deck by direct contact without the load coaming on the gaskets. The sealing is to be achieved by relatively soft packing. The hatch coaming or steel parts on the adjacent covers in contact with the packing are to be well rounded where necessary,  
A metallic contact is to be kept between the hatch cover and the hull to effect electrical earthing.
- 3.9.4 Where tarpaulins are fitted to make hatch covers weather tight. They are to be free from jute, and are to be waterproof and of ample strength. At least two layers of tarpaulins are to be provided and these are to be secured by battens and wedges or equivalent arrangements.

## **Section 4**

### **Miscellaneous Openings**

#### **4.1 Manholes**

- 4.1.1 Manholes on the weather decks are to be closed by substantial covers capable of closing them watertight.

#### **4.2 Companionways, doors and accesses on weather decks**

- 4.2.1 Companionways on exposed decks are to be equivalent in strength and weather tightness to a deckhouse in the same portion. The height of the doorway stills above deck is not to be less than 100 (mm) for Zone 3 and 150 (mm) for Zone 1 & 2.

For doorways directly leading to engine room the sill height above deck is to be not less than 400 (mm). In addition the sill height above load waterline should not be less than the values mentioned below:-

|        |           |
|--------|-----------|
| Zone 1 | 1000 (mm) |
| Zone 2 | 600 (mm)  |
| Zone 3 | 300 (mm)  |

#### **4.3 Openings on engine casing**

- 4.3.1 Machinery space openings are to have efficient closing appliances. The openings and coamings for fiddley, funnel and machinery space ventilators in the casing in those positions are to be provided with strong covers of steel or other equivalent material

permanently attached in their proper positions and capable of being secured weather tight.

- 4.3.2 Skylights are to be of a substantial construction and secured firmly to the deck. For skylights the coaming height is not to be less than that required for the hatch coamings. Efficient means are to be provided for closing and securing the hinged scuttles, if any. The thickness of glasses in fixed or opening skylights is to be appropriate to their position and size as required for side scuttles. Glasses are to be protected against mechanical damage, and are to be fitted with deadlights, or storm covers permanently attached.

- 4.3.3 Side scuttles in the engine casings are to be provided with fireproof glass.

#### 4.4 Windows and side scuttles

- 4.4.1 Side scuttles and windows are to be made and tested according to standards. The glass thickness of side scuttles below main deck is to be not less than 8.0 (mm).

The glass thickness of windows above deck to not be less than:-

$$t = \frac{w}{70} \text{ (mm), minimum of 6.0 (mm)}$$

where,

w = the height or the width of the window, whichever is smaller, (mm).

- 4.4.2 Side scuttles in the shell below main deck are to be non-opening type with deadlights and the lower edge of glass is to be at least 500 (mm) above the load water line in any condition of list or trim. Further, the scuttles are to be adequately protected against damage by direct contact.
- 4.4.3 Side scuttles and windows above deck may be fitted without deadlight / portable covers provided the height of lower edge of glass above waterline is not less than specified in Table 4.4.3.

| Table 4.4.3 : Height of side scuttles (mm) |            |
|--|------------|
| Zone 1                                     | $h_t$ (mm) |
| 1  | 1700       |
| 2  | 1000       |
| 3  | 50         |



## **Section 5**

### **Ventilators**

#### **5.1 General**

- 5.1.1 The scantlings of exposed ventilator coamings are to be equivalent to the scantlings of deckhouses in the same position. In cargo spaces and other areas where mechanical damage is likely, the ventilator trunks are to be well protected.

#### **5.2 Coaming heights**

- 5.2.1 Ventilators on exposed decks are to have the lower edge of openings at a height of not less than 300 (mm) above deck.

In addition the height of lower edge of openings above waterline are to be not less than specified in Table 5.2.1.

| <b>Table 5.2.1 : Ventilator coaming heights (mm)</b> |                                |                                   |
|--|--------------------------------|-----------------------------------|
|  | <b>With closing appliances</b> | <b>Without closing appliances</b> |
| Zone 1   | 1000                           | 1700                              |
| Zone 2   | 600                            | 1000                              |
| Zone 3   | 300                            | 500                               |

#### **5.3 Closing appliances**

- 5.3.1 Ventilator openings are to be fitted with efficient weather tight closing appliances if applicable as specified in Table 5.2.1.

## **Section 6**

### **Air and Sounding Pipes**

#### **6.1 General**

- 6.1.1 Air and sounding pipes are to comply with the requirements of Pt. 4, Ch.2.
- 6.1.2 Striking plates of suitable thickness, or their equivalent, are to be fitted under all sounding pipes.
- 6.1.3 Air and sounding pipes leading through cargo containment areas or other spaces where mechanical damage is likely to occur, are to be well protected.

**6.2 Height of air pipes**

- 6.2.1 The height of air pipes from the upper surface of decks exposed to the weather, to the point from where water may have access below, is not normally to be less than 300 (mm).

The heights above load waterline of air pipes with and without closing appliances are not to be less than as specified in Table 5.2.1 for ventilators.

- 6.2.2 Lower heights may be approved in class where these are essential for the working of the vessel, providing closing appliances are of an approved automatic type.

**6.3 Closing appliances**

- 6.3.1 Permanently attached closing appliances to prevent free entry of water are to be fitted to all sounding pipes and for air pipes where required as per 6.2.1
- 6.3.2 Where the closing appliances are not of an automatic type, provision is to be made for relieving vacuum when the tanks are being pumped out.

**Section 7****Scuppers and Sanitary Discharges****7.1 General**

- 7.1.1 Scuppers sufficient in number and size to provide effective drainage are to be fitted in all decks.
- 7.1.2 Scuppers draining weather decks and spaces within superstructures or deckhouses not fitted with efficient weather tight doors are to be led overboard.
- 7.1.3 Scupper and discharges which drain spaces below the main deck, or spaces within intact superstructures or deckhouses on the main deck fitted with efficient weather tight doors, may be led to the bilges in case of scuppers, or to suitable sanitary tanks in the case of sanitary discharges. Alternatively, they may be led overboard provided that the spaces drained are above the load waterline, and the pipes are fitted with efficient and accessible means of preventing water from passing inboard as required in 7.2.1.
- 7.1.4 Scuppers and discharge pipes should not normally pass through fuel oil or cargo oil tanks. Where scuppers and discharge pipes pass, unavoidably, through fuel oil or cargo oil tanks, and are led through the shell within the tanks, the thickness of the piping should be at least the same thickness as rule shell plating in way, derived from the appropriate chapters.

Piping within tanks is to be tested in accordance with Pt. 4, Ch. 2 and Ch.3.

7.1.5 All piping is to be adequately supported.

## **7.2 Closing appliances**

7.2.1 Where the inboard end of scuppers and discharges are below main deck, normally a screw down non-return valve in an accessible location is to be fitted to prevent water from passing inboard.

Where the inboard end is above the main deck, a non-return valve is to be fitted at the shell, if the height of the inboard end above waterline is lower than the following:-

Zone 1 – 1000 (mm)

Zone 2 – 600 (mm)

Zone 3 – 300 (mm)

## **7.3 Materials for valves, fittings and pipes**

7.3.1 All shell fittings and valves required by 7.2 are to be of steel, bronze or other approved ductile materials; ordinary cast iron or similar materials is not acceptable.

7.3.2 All these items, if made of steel or other approved material with low corrosion resistance, are to be suitable protected against wastage.

7.3.3 The lengths of pipe attached to the shell fittings, elbow pieces or valves are to be for galvanized steel or other equivalent approved material.

**END OF CHAPTER**

**Chapter 12****Rudders****Contents****Section**

1. General
2. Arrangement and details
3. Design Loads
4. Rudder Blades
5. Rudder Stock and Pintles
6. Rudder Couplings

**Section 1****General****1.1 Scope**

The requirements of this Chapter apply to arrangement and scantlings of normal streamlined or plate rudders and their supporting structure. Rudder fitted with special features e.g. special profiles, fins, flaps, steering propellers etc. to increase the lift force will be specially considered.

**1.2 Material**

- 1.2.1 All materials used in the construction of the rudder are to be tested and approved in accordance with Pt.2. 'Materials' of the Rules and Rules for the Construction and Classification Steel Vessels (Main Rules).
- 1.2.2 Material grades for plates and sections for the rudder blade are to be selected as per Pt. 3, Ch. 2, Sec. 1.3.
- 1.2.3 Bearing materials for bushings are to be stainless steel, bronze, white metal, synthetic material or lignum vitae. If stainless steel is proposed to be used for liners or bushes for the rudder stocks and pintles, the chemical composition is to be submitted for approval.

Hardness of the material of the bushing is to be at least 65 Brinell lower than that of the liner or the rudder stock or pintle.

Synthetic bush materials are to be of approved type. Arrangement is to be provided for adequate supply of sea-water to these bearings.

### 1.3 Testing

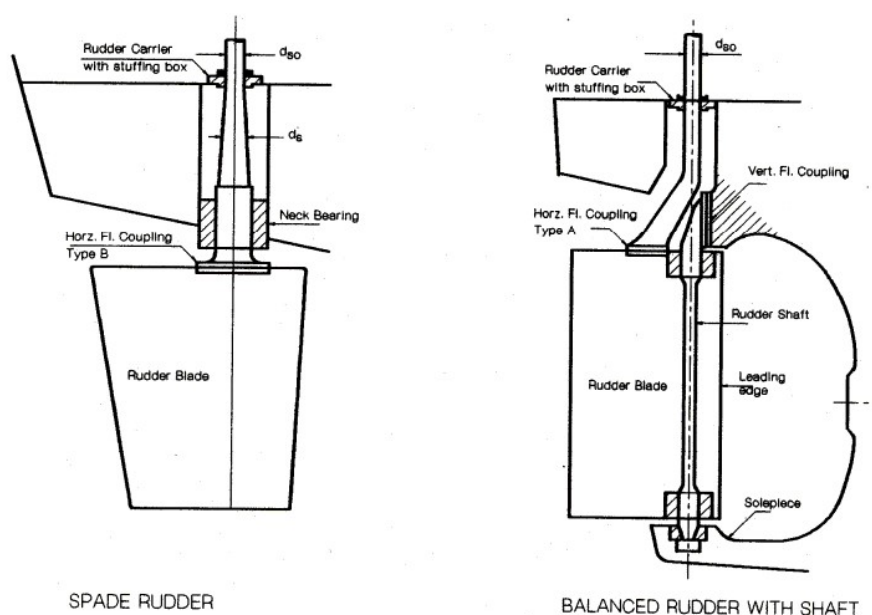
- 1.3.1 Bodies of the rudder are to be tested in accordance with the requirements given in Ch. 15.

## Section 2

### Arrangement and Details

#### 2.1 General

- 2.1.1 Various types rudder arrangement are shown in Fig 2.1.1; other combinations of couplings and bearing may, however, be proposed.



**Fig.2.1.1 : Types of rudders**

#### Figure

- 2.1.2 Effective means are to be provided for supporting the weight of the rudder. Where the support is provided by a carrier bearing attached to the rudder head, the structure in way of the bearing is to be adequately strengthened. The plating under all rudder head bearing or rudder carriers is to be increased in thickness.
- 2.1.3 All rudder bearings are to be accessible for measuring water without lifting or unshipping the rudder.
- 2.1.4 Satisfactory arrangement is to be provided to prevent water from entering the steering gear compartment and lubricant from being washed away from the rudder carrier. A seal or stuffing box is to be fitted above the deepest load water line for this purpose

unless the top of the rudder trunk (steering gear flat) is more than 300 (mm) above the deepest waterline in way trimmed condition. When the rudder carrier is fitted below the deepest load water line, two separate seals or stuffing boxes are to be provided.

- 2.1.5 Suitable arrangement is to be provided to prevent the rudder from lifting and accidental unshipping.

### Section 3

#### Design Loads

#### 3.1 Rudder force

- 3.1.1 The rudder force, upon which rudder scantlings are to be based, is to be determined from the following formula:-

$$F_r = 132 \cdot K_1 \cdot K_2 \cdot K_3 \cdot A \cdot V^2 (N) \text{ Where,}$$

$F_r$  = rudder force (N)

$A$  = area of rudder blade ( $m^2$ )

$V$  = maximum achievable vessel speed (knots) in the lightest operating condition in which the rudder is fully immersed.  $V$  is not to be taken as less than 6 knots.

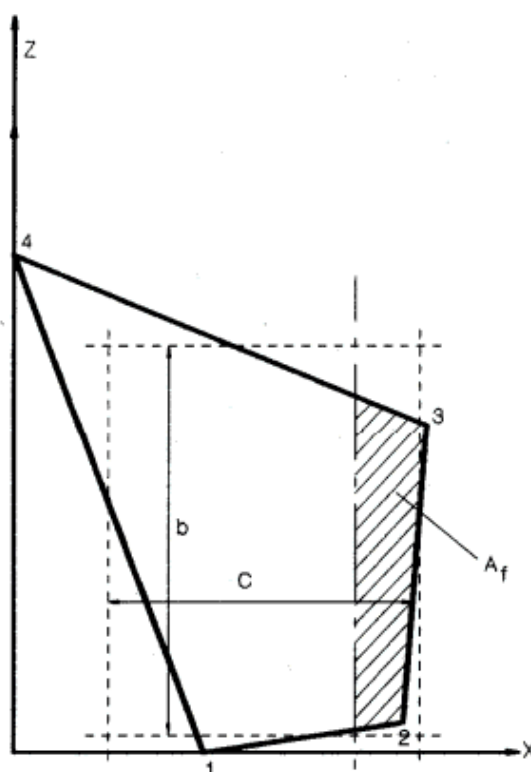
For astern condition, the maximum astern speed is to be used, but in no case less than:-

$$V_{\text{astern}} = 0.5V$$

$K_1 = (\lambda + 2)/3$ ; with  $\lambda$  not to be taken greater than 2.

$\lambda = b^2/A_t$  where  $b$  is the mean height of the rudder area (m) and  $A_t$ , the sum of rudder blade area and area of rudder post or rudder horn, if any, within the height  $b(m^2)$

Mean breadth  $C$  (m) and mean height  $b$  (m) of rudder are calculated according to the co-ordinate system in Fig. 3.1.1.



**Fig.3.1.1 : Rudder dimensions**

**Figure**

$K_2$  = Factor depending on the kind of rudder profile as per Table 3.1.1.

$K_3 = 0.80$  for rudder outside the propeller jet.

= 1.15 for rudders behind a fixed propeller nozzle.

= 1.0 otherwise.

| <b>Table 3.1.1</b>           |                         |               |
|------------------------------|-------------------------|---------------|
| <b>Profile type</b>          | <b><math>K_2</math></b> |               |
|                              | <b>Ahead</b>            | <b>Astern</b> |
| NACA : 00 Gottingen profiles | 1.1                     | 0.80          |
| Hollow profiles              | 1.35                    | 0.90          |
| Flat side profiles           | 1.1                     | 0.90          |

### 3.2 Rudder torque

- 3.2.1 The rudder torque on regular shaped rudders in both ahead and astern conditions of travel is to be calculated as follows:-

$$Q_t = F_t \cdot r \text{ (N-m);}$$

Where,

$r = x_c - f \text{ (m);}$  but not to be taken less than  $0.1 C$ .

$x_c$  = the distance of the point of application of the design force  $F_r$  from the leading edge.

=  $0.33 C$  in ahead condition.

=  $0.66 C$  in astern condition.

$C$  = Mean breadth of the rudder (m) See Fig. 3.1.1.

$f = C \cdot A_f/A$  where  $A_f$  is the portion of the rudder blade area situated ahead of the centre line of the rudder stock.

- 3.2.2 In case of rudder blades with stepped contours the total rudder torque is to be obtained as follows:-

$$Q_f = \sum Q_n \text{ for } i = 1, 2, 3 \dots$$

Where,

$Q_{ri} = F_{ri} \cdot r_i$ , individual torque component from each part  $A_i$  of the total rudder area.

$$F_{ri} = F_r \cdot A_i/A$$

$r_i = X_{ci} f_i$ ; but not to be taken less than  $0.1 C_i$ .

$X_{ci} f_i$  and  $C_i$  are to be taken as  $X_c$ ,  $f$  and  $C$  as in 3.2.1 for each discrete part except that for those rudder parts immediately aft of rudder horn  $X_{ci}$  is to be taken as  $0.25C_i$  and  $0.55C_i$  in ahead and astern conditions respectively.

### 3.3 Bending moments, shear forces and reactions

- 3.3.1 The bending moment (BM) and shear force (SF) distributions along the entire height of the rudder blade and rudder stock as well as the bearing reaction (R) may be obtained by direct calculation. The rudder is to be assumed as simply at the centers of the upper bearing and the neck bearing. In case of rudders supported by the sole piece or rudder horn the flexibility of the sole piece or rudder horn, and rudder and rudder stock is to be taken into consideration.

- 3.3.2 For common types of rudders, the following approximate values may be used:-

- **For balanced rudder with heel support:-**

$$BM = \frac{F_r \cdot b}{8} \text{ (N - m)}$$



at mid-height of the rudder blade;

$$= \frac{F_r \cdot b}{7} (N - m)$$

at center of neck bearing

$$SF = 0.6 F_r (N)$$

at top and bottom ends of the rudder blade;

$$= 0.1 F_r (N)$$

at mid-height of the rudder blade.

$$R = 0.6 F_r (N)$$

at the heel pintle bearing;

$$= 0.7 F_r (N)$$

at the neck bearing / stern pintle;

$$= 0.1 F_r (N)$$

at the upper bearing

- **For spade rudders:-**

$$BM = \frac{F_r A_1 b_1}{A} (N - m)$$

at any cross section below and including the neck bearing.

$$SF = \frac{F_r A_1}{A} (N)$$

at any cross section upon the center of the neck bearing.

$$R = \frac{b_2 + b_3}{b_2} \cdot F_r (N - m)$$

at the neck bearing;

$$= \frac{b_2}{b_3} \cdot F_r (N)$$

at upper bearing;

Where,

$A_1$  = rudder area below the cross section under consideration.

$b_1$  = vertical distance from the centroid of  $A_1$  to the cross section;

$b_2$  = vertical distance from the centroid of rudder area  $A$  to the center of the neck bearing, and

$b_3$  = vertical distance between the centers of the upper and lower bearings.

- 3.3.3 At upper bearing the bending moments are to be taken as zero and between the upper bearing and the neck bearing the bending moments may be varied linearly.

## Section 4

### Rudder Blades

#### 4.1 Construction

- 4.1.1 Care is to be taken to avoid notch effects and to maintain continuity of strength around cut-outs and openings in the side plating. The plating thickness is to be increased suitably and corners are to be well rounded and ground smooth.
- 4.1.2 Side plating and vertical webs transmitting the torque are to be welded to the coupling flange by full penetration welds.
- 4.1.3 In general, welds between plates and heavy places are to be made as full penetration welds, where back welding is not practicable, welding is to be performed against backing bar or equivalent.
- 4.1.4 Webs are to be connected to the side plating in accordance with Ch.14. Where fillet welding is not practicable, side plating is to be connected by means of slot welding to flat bars welded to the webs. Normally slots of length 75 (mm), breadth at least twice the side plating thickness and spaced 200 (mm) center to center will be accepted. The ends of the slots are to be well rounded. In areas subjected to large bending stresses, horizontal slots may require to be replaced by continuous weld.
- 4.1.5 Arrangement is to be provided to drain the rudder completely. Drain plugs are to be provided with efficient packing.
- 4.1.6 Internal surfaces of rudders are to be efficiently coated for corrosion resistance after completion of fabrication and testing. Where it is intended to fill the rudder with plastic foam. Details of the foam material are to be submitted.

#### 4.2 Double plated rudders

- 4.2.1 Thickness 't' of the rudder side, top and bottom plating is not to be less than:-

$$t = 5.5 s f_a \sqrt{T + \frac{Fr}{A} \cdot 10^{-4}} \cdot 10^{-3} + 2.5 \text{ (mm)}$$

Where,

$$f_a = \sqrt{1.1 - 0.5 \left( \frac{s}{1000} \cdot l \right)^2} ; \text{ max } 1.00$$

s = the smaller of the distance between the horizontal or the vertical web plates (mm).

l = the larger of the distance between the horizontal or the vertical web plates (m).

The thickness 't' is however not to be less than the minimum side shell thickness as per Pt. 3, Ch. 7

For nose plates the thickness is to be increased to 1.25 t.

- 4.2.2 The thickness of the vertical and horizontal webs is not to be less than 70 percent of the requirement given in 4.2.1 with a minimum of 7 (mm).
- 4.2.3 The thickness of side plating and vertical webs forming the main piece may have to be increased locally in way of the coupling and cutouts or openings, if any.

### 4.3 Single plated rudders

- 4.3.1 Rudder blade thickness is not to be less than:-

$$t = 1.5 \cdot y \cdot V \cdot 10^{-3} + 2.5 \text{ (mm)}$$

where y is the spacing of horizontal arms (mm); and V, the speed in knots as per 3.1.1.

- 4.3.2 Rudder blade is to be stiffened by horizontal arms spaced not more than 1000 (mm) apart. The arms are to be efficiently attached to the main piece. The thickness of the arms is not to be less than the blade thickness. The section modulus of the arms in way of main piece is not to be less than:-

$$Z = 0.5 \cdot y \cdot x^2 V^2 \cdot 10^{-3} \text{ (cm}^3\text{)}$$

Where,

X is the distance from the center line of the stock to the after end of the rudder (m).

- 4.3.3 The diameter of the main piece at top end is not to be less than that of the lower rudder stock, and it may be gradually reduced towards lower end.

## Section 5

### Rudder Stock and Pintles

#### 5.1 Rudder stock

- 5.1.1 Diameter of the rudder stocks, when obtained by direct calculation, are normally to give an equivalent stress not exceeding 138 (N/mm<sup>2</sup>) i.e.

$$\sigma_e = \sqrt{\sigma^2 + 3\tau_t^2} \leq 138 \text{ (N/mm}^2\text{)}$$

Where,

$\sigma$  is the bending stress (N/mm<sup>2</sup>).

$\tau_t$  is the torsional shear stress (N/mm<sup>2</sup>).

This requirement is regardless of the liners; and both ahead and astern conditions are to be considered.

- 5.1.2 The diameter of the rudder stock at and above rudder carrier is given by:-

$$d_u = 4.0 \sqrt[3]{Q_r} \text{ (mm)}$$

- 5.1.3 The diameter of rudder stock at any other cross section is given by

$$d_s = d_u \sqrt[6]{\left(1 + \frac{4}{3} \cdot \frac{BM^2}{Q_r^2}\right)} \text{ (mm)}$$

where BM is the bending moment at the cross section under consideration obtained as per 3.3.

- 5.1.4 The diameter of the rudder stock at neck bearing is to be maintained to a point as far as practicable above the top of the neck bearing and may subsequently be tapered to that required at the rudder carrier. The length of the taper is to be at least three times the reduction in diameter. Particular care is to be taken to avoid the formation of a notch at the upper end of the taper.
- 5.1.5 Sudden changes of section or sharp corners in way of the rudder coupling, jumping collars and shoulders for rudder carriers are to be avoided, jumping collars are not to be welded to the rudder stock. Keyways in the rudder stock are to have rounded ends and the corners at the base of the keyways are to be adequately ready used.

## 5.2 Pintles and bearings

- 5.2.1 The diameter  $d_p$  of the pintles, measured on the inside of liners where fitted, is not to be less than:-

$$d_p = 0.35 \sqrt{R} \text{ (mm)}$$

Where,

R = Reaction force (N) at the pintle bearing, obtained as per Sec. 3.3.

- 5.2.2 Pintles are to have a conical attachment to the gudgeons and the taper on diameter is generally to range between 1:8 to 1:12. The slugging nut is to be efficiently secured. An effective sealing against sea water is to be provided at both ends of the cone.
- 5.2.3 The length of pintle housing in the gudgeon is not to be less than the pintle diameter  $d_p$ . The thickness of the pintle housing is not to be less than  $0.25d_p$ .
- 5.2.4 Where liners are fitted to pintles, they are to be shrunk on or otherwise efficiently secured. If liners are to be shrunk on, the shrinkage allowance is to be indicated on the plans. Where liners are formed by stainless steel weld deposit, the pintles are to be of weldable quality steel, and details of the procedure are to be submitted. Bushing is to be effectively secured against movement.
- 5.2.5 Pintle clearances are normally to be as given in Table 5.2.5.
- Attention is to be paid to the manufacture's recommendations particularly where brush material requires pre-soaking.

| <b>Table 5.2.5 : Pintle Clearances</b> |  |
|--|--|
| - For metal bearing material           | 0.001 d <sub>p</sub> + 1.0 (mm)  |
| - For synthetic bearing material       | To be specially determined considering the swelling and internal expansion properties of the material, but not less than 1.5 (mm). |

5.2.6 The bearing pressure 'p' due to reaction 'R' on projected bearing area is not to exceed the values given in Table 5.2.6. For the purpose of this calculation, the bearing length is not to be taken greater than 1.2 times the rudder stock or pintle diameter measured outside of liners, if fitted. Higher values than given in the table may be taken on verification by tests.

| <b>Table 5.2.6 : Bearing pressure</b>  |                             |
|--|-----------------------------|
| <b>Bearing Materials</b>   | <b>P (N/mm<sup>2</sup>)</b> |
| Steel or bronze against lignum vitae   | 2.5                         |
| Steels against white metal, oil lubricated   | 4.5                         |
| Steel against synthetic material with hardness between 60 and 70 shore D <sup>(1)</sup>  | 5.5                         |
| Steel against stainless steel, bronze and hot pressed bronze-graphite materials  | 7.0                         |
| Note:- (1) Indentation hardness test at 23° C and with 50% moisture, according to a recognized standard, synthetic bearing materials to be of approved type. |                             |

## Section 6

### Rudder Couplings

#### 6.1 Horizontal bolted couplings

6.1.1 The diameter of the couplings bolts is not to be less than:—

$$d_b = 0.62 \frac{d_s^3}{n.e_m} )^{1/2} \text{ (mm)}$$

Where,

d<sub>s</sub> = Rule stock diameter (mm) in way of the coupling flange;

n = total number of bolts;

e<sub>m</sub> = mean distance of the bolts axis from the center of the bolt system (mm).

- 6.1.2 Coupling bolts are to be fitted bolts and a minimum of six (6) bolts are to be provided. Their nuts are to be effectively locked.
- 6.1.3 Mean distance  $e_m$  from the center of the bolts to the center of the bolt system is not to be less than  $0.9 d_s$  (mm). In addition, where the coupling is subjected to bending stress the mean a thwart ship distance from the center of bolts to the longitudinal centerline of the coupling is not to be less than  $0.6 d_s$  (mm).
- 6.1.4 The thickness of coupling flanges is not to be less than the diameter of the coupling bolts.
- 6.1.5 The width of material outside the bolt holes is not to be less than  $0.67 d_b$  (mm).

## **6.2 Vertical flange couplings**

- 6.2.1 The diameter of the coupling bolts is not to be less than:-

$$d_b = 0.81 \left( \frac{d_s^3}{n} \right)^{1/2} \text{ (mm)}$$

where,

$d_s$  = Rule stock diameter (mm) in way of the coupling flange

$n$  = total number of bolts, not to be less than 8.

- 6.2.2 The first moments of area of the bolts about the center the coupling to be not less than:-

$$m = 0.00043 d_s^3 \text{ (cm}^3\text{)}$$

- 6.2.3 The thickness of the coupling flanges must be at least equal to the bolt diameter; and the width of the flange material outside the bolt holes must be greater than or equal to  $0.67 d_b$ .

**END OF CHAPTER**

**Chapter 13**  
**Anchoring and Mooring Equipment**  
**Contents**

**Section**

- 1 General
- 2 Structural Arrangement for Anchoring Equipment
- 3 Equipment Specification
- 4 Anchors
- 5 Anchor Chain Cables
- 6 Towlines and Mooring Lines
- 7 Windlass

**Section 1**  
**General**

**1.1 Introduction**

- 1.1.1 To entitle a vessel to the letter 'L' in her character of classification, anchoring and mooring equipment is to be provided in accordance with the requirements of this Chapter.

These requirements are based on maximum current of 8 (km/hr), wind speed of 25 (m/sec), water depth of 5-7 (m) and good holding ground conditions. Where environmental conditions are more onerous, special consideration will be required.

- 1.1.2 Except in case of tugs, towlines are not subject of classification and the details given in the equipment table are for guidance purpose only. However, for tugs intended for towing other vessels, having onboard suitable lines for the same purpose, the requirement of towline may be waived with written concurrence from the Owners.
- 1.1.3 Attention is drawn to any relevant requirements of the local authorities with which the vessel is to be registered.

**1.2 Documentation**

- 1.2.1 The arrangement of anchoring and mooring equipment and equipment number calculations are to be submitted for information.
- 1.2.2 Following details of the proposed equipment are to be submitted for approval:-
- 1) Number, weight, type and design of anchors.

- 2) Length, diameter, grade and type of chain cables.
- 3) Type and breaking load of steel and fiber ropes.

### **1.3 Symbols**

- 1.3.1 L, B, T as defined in Ch. 1, Sec. 2.

## **Section 2**

### **Structural Arrangement for Anchoring Equipment**

#### **2.1 General**

- 2.1.1 The anchors are normally to be housed in hawse pipes and anchor pockets of adequate size, scantlings and suitable form to prevent movement of anchor and chain due to wave action.

The arrangements are to provide an easy lead of chain cable from windlass to the anchors. Upon release of the brake, the anchors are to immediately start falling by their own weight. Substantial chafing lips are to be provided at shell and deck. These are to have sufficiently large, radiused faces to minimize the probability of cable links being subjected to large bending stresses. Alternatively, roller fairleads of suitable design may be fitted.

Alternative arrangements for housing of anchors will be specially considered.

- 2.1.2 The shell plating and framing in way of the hawse pipes are to be reinforced as necessary.

- 2.1.3 The chain locker is to have adequate capacity and depth to provide an easy direct lead for the cable into the chain pipes, when the cable is fully stowed. The chain pipes are to be suitable size and provided with chafing lips. The port and starboard cables are to have separate spaces. The chain lockers boundaries are to be watertight. Provisions are to be made to minimize the ingress of water to the chain locker in bad weather. Adequate arrangement for drainage of chain lockers is to be provided.

Provisions are to be made for securing the inboard ends of the chains to the structure. The strength of this attachment should be between 15 percent to 30 percent of the breaking strength of the chain cable. It is recommended that suitable arrangements be provided so that in an emergency the chain can be readily made to slip from an accessible position outside the chain locker.



- 2.1.4 The windlass and chain stoppers are to be efficiently bedded and secured to deck. The thickness of deck plating is to be increased in way of the windlass and chain stoppers and adequate stiffening underneath is to be provided.

### Section 3

#### Equipment Specification

##### 3.1 Equipment number

- 3.1.1 The equipment number, EN, on which the requirements of equipment are based is to be calculated as follows:-

$$EN = \Delta^{2/3} + 0.1A$$

$\Delta$  = molded displacement, (t), corresponding to the maximum load water line.

A = area (m<sup>2</sup>) in profile view of the hull above the maximum load waterline, including super structure, deck houses, trunks and hatch coamings, which are within the Rule length of the vessel. Houses of breadth less than B/4 may be disregarded.

In the calculation of A, sheer and trim are to be ignored.

Parts of the windscreens or bulwarks which are more than 0.8 (m) in height are to be regarded as parts of houses when determining A.

##### 3.2 Equipment

- 3.2.1 The anchors, chain cables, towlines and mooring lines for all vessels are to comply with Table 3.2.1, except where modified for particular vessel types as per 3.2.2 to 3.2.6 below.
- 3.2.2 For vessels without a sharp stem, a single anchor of twice the mass may be fitted in lieu of the two bower anchors required as per the table.
- 3.2.3 For all self-propelled vessels except tugs, operating on rivers where, in view of their length, they cannot safely turn for anchoring with the bow in an upstream direction, the mass of the stern anchor is to be twice that required as per the table.
- 3.2.4 For tugs intended for pushing or side tow operations, two stern anchors are to be provided and the mass of each anchor is to be based on EN calculated considering the complete barge train; but not less than 300 (kg.)
- 3.2.5 For tugs intended for towing operations only, stem anchors need not be provided; and for tugs intended for pushing operations only, bower anchors need not be provided.
- 3.2.6 For non-propelled vessels intended to be towed, two stern anchors of the tabular mass or one stern anchor of twice the mass are to be provided.

| <b>Table 3.2.1 : Equipment – Anchors, anchor cables, towlines and mooring lines</b> |  |   |   |   |
|---|--|---|---|---|
| <b>EN</b>   | <b>Stockless<br/>bower anchors,<br/>See Note 1<br/>mass (kg)</b> | <b>Stockless<br/>stern anchors<br/>See Note 2<br/>mass (kg)</b> | <b>Towline<br/>(Recommend<br/>ation) See<br/>Note 3</b> | <b>Mooring lines<br/>See Note 4</b>           |
|   |  |   | <b>Minimum<br/>breaking<br/>strength (kN)</b>           | <b>Minimum<br/>breaking<br/>strength (kN)</b> |
| 4 & ≤ 6   | 35   | -   | -   | -   |
| > 6 & ≤ 8   | 45   | -   | -   | -   |
| > 8 & ≤ 10  | 60   | -   | -   | 14  |
| > 10 & ≤ 12   | 70   | -   | -   | 17  |
| > 12 & ≤ 14   | 85   | -   | -   | 20  |
| > 14 & ≤ 17   | 100  | -   | -   | 24  |
| > 17 & ≤ 20   | 115  | -   | -   | 28  |
| > 20 & ≤ 25   | 145  | -   | 56  | 36  |
| > 25 & ≤ 30   | 175  | -   | 67  | 43  |
| > 30 & ≤ 40   | 230  | 115   | 90  | 57  |
| > 40 & ≤ 50   | 290  | 145   | 112   | 72  |
| > 50 & ≤ 60   | 345  | 175   | 134   | 86  |
| > 60 & ≤ 70   | 400  | 200   | 157   | 100   |
| > 70 & ≤ 80   | 460  | 230   | 179   | 115   |
| > 80 & ≤ 90   | 520  | 260   | 202   | 129   |
| > 90 & ≤ 100  | 575  | 290   | 224   | 143   |
| > 100 & ≤ 110   | 635  | 320   | 231   | 158   |
| > 110 & ≤ 120   | 690  | 345   | 238   | 175   |
| > 120 & ≤ 130   | 735  | 370   | 245   | 182   |
| > 130 & ≤ 140   | 780  | 390   | 252   | 187   |
| > 140 & ≤ 150   | 825  | 420   | 259   | 192   |
| > 150 & ≤ 160   | 870  | 435   | 266   | 197   |
| > 160 & ≤ 170   | 915  | 460   | 272   | 202   |
| > 170 & ≤ 180   | 960  | 480   | 279   | 208   |
| > 180 & ≤ 190   | 1000   | 500   | 286   | 213   |

|               |      |     |     |     |
|---------------|------|-----|-----|-----|
| > 190 & ≤ 200 | 1045 | 525 | 293 | 218 |
| > 200 & ≤ 210 | 1090 | 550 | 300 | 223 |
| > 210 & ≤ 220 | 1135 | 570 | 307 | 228 |
| > 220 & ≤ 230 | 1180 | 590 | 314 | 233 |
| > 230 & ≤ 240 | 1225 | 615 | 321 | 238 |
| > 240 & ≤ 250 | 1270 | 635 | 328 | 244 |
| > 250 & ≤ 260 | 1315 | 660 | 335 | 249 |
| > 260 & ≤ 270 | 1360 | 680 | 342 | 254 |
| > 270 & ≤ 280 | 1405 | 700 | 349 | 259 |
| > 280 & ≤ 290 | 1450 | 725 | 355 | 264 |
| > 290 & ≤ 300 | 1495 | 750 | 362 | 269 |

Notes:-

1. Normally two stockless bower anchors are required but see 3.2.2
2. i) For self propelled vessels, see 3.2.3  
ii) For tugs, see 3.2.4 and 3.2.5  
iii) For non-propelled vessels being towed, see 3.2.6
3. The length of the towline is to be not less than given by the following formulae, as appropriate:-
  - a)  $L + 75$  (m) for vessels  
for which  $20 \leq EN \leq 160$
  - b)  $L + 100$  (m) for vessels  
for which  $EN \leq 160$ .

For tugs intended for towing the breaking strength of the towline not to be less than twice the maximum.
4. Two mooring lines are required for vessels for which EN is below 100 and three for vessels having larger values. The length of each wire in the mooring lines is to be not less than  $2.5 L$ , but need not be more than 100 (m).
5. The length of short or stud link chain cable for each bower anchor is to be not less than  $L + 10$  (m) with a minimum of 40 (m) and a maximum of 60 (m). The minimum breaking strength of the chosen diameter and grade of short or stud link chain cable or wire is to be not less than 0.343 times the mass of anchor (kg) in case of ordinary anchor and 0.458 times the mass of anchor (kg) in case of HH Panchor.

6. The length of cable for each stern anchor, on vessels for which  $EN > 30$  is to be not less than 40 (m).

## **Section 4**

### **ANCHORS**

#### **4.1 General**

- 4.1.1 Anchors are to be of an approved design and a type suitable for the intended service.
- 4.1.2 The mass of each bower anchor as required in Sec. 3 is for anchors of equal mass. The masses of individual anchors may vary  $\pm 7$  percent of the tabular masses, provided that the total mass of the anchors is not less than would have been required for anchors of equal mass. Where the maximum current expected in service differs considerably from 8 (km/h), the anchor weight required by Table 3.2.1 is to be suitably modified.
- 4.1.3 The mass of head, including pins and fittings, of an ordinary stockless anchor is not to be less than 60 percent of the total mass of the anchor.
- 4.1.4 The mass 'ex stock' of stocked bower or steam anchors is not to be less than 80 percent of the tabular mass of ordinary stockless bower anchors. The mass of the stock is to be 25 percent of the total mass of the anchor including the shackle etc. but excluding the stock.
- 4.1.5 When anchor s of a design approved for the designation 'High Holding Power' are used as bower anchors, the mass of each such anchor may be 75 percent of the tabular mass of ordinary stockless bower anchors. For approval of HHP anchors, see Pt. 3, Ch. 15, Cl. 4. 2 of *The Rules and Rules for the Construction and Classification of Steel Vessels (Main Rules)*.
- 4.1.6 Anchor shackles are to be of a design and material suitable to the service for which the anchor is intended.
- 4.1.7 Anchors and anchor shackles are to be manufactured and tested in accordance with the requirements of Pt. 2, Ch. 10 of *the Rules and Rules for the Construction and Classification of Steel Vessels (Main Rules)*.

## Section 5

### Anchor Chain Cables

#### 5.1 General

- 5.1.1 Chain cables may be either short link or stud link and of mild steel or special quality steel meeting the requirements of breaking strength and the length as given in Table 3.2.1. The required chain diameter is to be obtained by using tables of chain breaking strength given in Pt. 2, Ch. 10 of *the Rules and Rules for the Construction and Classification of Steel Vessels (Main Rules)*.
- 5.1.2 In conjunction with HHP anchors, only Grade CC2 or ISO Grade 40 chain cable is to be used, however, for HHP anchors having a mass of 300 (kg) or less, Grade CC1 chain cable may be accepted provided the diameter of Grade CC1 cable required is increased by five percent.
- 5.1.3 When desired by the Owners, steel wires may be used instead of chain cables. Steel wires are to have a breaking strength not less than that required for chain cables and their length is to be not less than 25 percent in excess of the length required for chain cable as per Table 3.2.1.

In such case it is recommended that a short length of chain or a swivel is fitted between the anchor and the wire rope.

#### 5.2 Manufacture and testing

- 5.2.1 Chain cables, steel wire ropes and shackles are to be manufactured and tested in accordance with the requirements of Pt. 2, Pt. 2, Ch. 10 of *the Rules and Rules for the Construction and Classification of Steel Vessels (Main Rules)*.

## Annexure – 1

## Section 6

### Towlines and Mooring Lines

#### 6.1 General

- 6.1.1 Towlines and mooring lines may be of steel wire, natural fiber or synthetic fiber and are to be made by an approved manufacturer.
- 6.1.2 The number, length and breaking strength of towlines and mooring lines are to be as required by Sec. 3. Also see Sec. 1.1.2.
- 6.1.3 The lengths of individual mooring lines may be reduced by up to 10 percent of the tabular length, provided that the total length of mooring lines is not less than would have resulted had all lines been of equal tabular length.

6.1.4 The diameter of a fiber rope is not to be less than 20 (mm).

## **6.2 Manufacture and testing**

6.2.1 Steel wire ropes are to be manufactured and tested in accordance with the requirements of Pt. 2, Ch. 10 of *the Rules and Rules for the Construction and Classification of Steel Vessels (Main Rules)*.

## **6.3 Mooring arrangement**

6.3.1 Means are to be provided to enable mooring lines to be efficiently secured on board vessel by an adequate number of suitably placed bollards on either side of the vessel.

6.3.2 Mooring winches should be fitted with drum brakes of sufficient strength to prevent unreeling of the mooring lines.

6.3.3 Adequate stiffening is to be provided in way of Bollards, Mooring winches etc.

# **Section 7**

## **Windlass**

### **7.1 General**

7.1.1 The requirements of 7.1.2 to 7.1.5 apply equally to bow and stern anchor winches.

7.1.2 On vessels equipped with anchors having a mass of over 50 (kg), windlass(es) of sufficient power and suitable for the type and size of chain cable are to be fitted. Arrangements for anchor davits will be specially considered.

7.1.3 The windlasses may be hand or power operated. Hand operated windlasses are acceptable only if effort required at the handle does not exceed 15 (kgf) for raising one anchor at a speed of not less than 2 (m/min) and making about 30 turns of the handle per minute.

7.1.4 A power operated windlass is to be capable of exerting, for a period not less than 30 minutes, a continuous duty pull of  $28 d_c^2$  (N) and to raise one anchor with chain cable at mean speed of not less than 9 (m/min),  $d_c$  (mm) being the diameter required for Grade CC1 chain cable.

7.1.5 Winches suitable for operation by hand as well as by external power are to be so constructed that the power drive cannot activate the hand drive.

### **7.2 Testing**

7.2.1 After installation on board, anchoring tests are to be carried out to demonstrate satisfactory working.

## **End of Chapter**

## **Chapter 14**

### **Welding**

#### **Contents**

#### **Section**

- 1 General
- 2 Welding
- 3 Welded Connections

#### **Section 1**

##### **General**

#### **1.1 Scope**

- 1.1.1 Welded in steel hull construction of all types of vessels is to comply with the requirements of this Chapter.

Welding in aluminum structures will be specially considered.

#### **1.2 Documentation**

- 1.2.1 Connection details of the welded structural members, including type and size of welds are to be clearly indicated on the plans submitted for approval. An explanation of all symbols or abbreviations used in detailing the weld connections should be included on the plans.

Details of proposed welding procedure is to be submitted indicating preheating temperature and any post welding heat treatment, if employed. Extent to which automatic welding, including deep penetration welding, is to be employed should also be indicated.

#### **Section 2**

##### **Welding**

#### **2.1 Welders and supervision**

- 2.1.1 Welders are to be proficient in the type of work on which they are to be engaged. The records of their tests and qualifications are to be kept by the builders and made available to the Surveyors. A sufficient number of skilled supervisors are to be employed to ensure effective control at all stages of assembly and welding operations.

**2.2 Welding electrodes**

- 2.2.1 Electrodes and welding consumables approved by IRS in accordance with the requirements of Pt. 2, Ch. 11 and suitable for the types of joint and grade of steel, are to be used.
- 2.2.2 For the connection of two different grades of steel of the same tensile strength properties, electrodes suitable for the lower grade will be generally acceptable except at structural discontinuities or other points or stress connection.
- 2.2.3 For the connection of steel of different tensile strengths, the electrodes are to be suitable for the tensile strength of the component, on the basis of which the weld fillet size has been determined in Sect. 3.

**2.3 Preparation for welding**

- 2.3.1 The parts to be welded are to be fitted in accordance with the approved joint details. The edge preparation is to be accurate and uniform.

Means are to be provided for maintaining the parts to be welded, in correct position during the welding operations. Excessive force is not to be employed in aligning the parts before welding and the means employed in maintaining the alignment are to be so arranged as to allow for expansion and contraction during the welding operation. All methods employed in correcting improper alignment are to be to the satisfaction of the Surveyor.
- 2.3.2 All surfaces to be welded are to be clean, dry and free from rust, scale and grease. The surface and boundaries of each run of deposit are to be thoroughly cleaned and freed from slag before the next run is applied. Before a manual sealing run is applied to the back of a weld, the original root material is to be gouged out to sound metal.
- 2.3.3 Tack welding is to be kept to a minimum, and where used, should be equal in quality to that of the finished welds. Any defective tack weld is to be cut out before completing the finished welds. Care is to be taken in removing the tack welds to ensure that the structure is not damaged in doing so.

**2.4 Welding procedure**

- 2.4.1 Only approved welding procedures are to be used, See 2.5.
- 2.4.2 Structural arrangements are to be such as to allow adequate access for satisfactory completion of all welding operations. Welded joints are to be so arranged so as to facilitate down hand welding wherever possible.
- 2.4.3 The sequence of welding is to be so planned that any restraint during welding operations is reduced to a minimum. The ends of the frames and stiffeners should be



left unattached to the plating at the subassembly stage until connecting welds are made, in the intersecting systems of plating, framing and stiffeners, at the erection stage.

Where a butt meets a seam, the welding of the seam should be interrupted well clear of the junction and not be continued until the butt is completed. Welding of the butt should continue past the open seam and the weld be chipped out for the seam to be welded straight through.

- 2.4.4 Adequate precautions are to be taken to ensure that the welding site is protected from the deleterious effects of high moisture, severe wind and extreme cold.

## **2.5 Approval of Procedures**

- 2.5.1 Unless previously approved, welding procedures are to be established by the yard and forwarded to IRS for approval. The welding procedure specifications are to include detailed description of the base material, primer, plate thickness range, joint / groove design, welding consumable, welding position, welding techniques, welding parameters, preheating / inter pass temperature and post heat treatment if any.

The welding for procedure qualification and subsequent testing, are to be witnessed by the IRS Surveyor.

## **2.6 Inspection of welds**

- 2.6.1 Effective arrangements are to be provided for the inspection of finished welds to ensure that all welding has been satisfactorily completed.
- 2.6.2 All finished welds are to be visually inspected and are to be sound, uniform and substantially free from slag inclusions, porosity, undercutting or other defects. Welds and adjacent base metal are to be free from injurious arc strikes.
- 2.6.3 For the examination of important structural welds, visual inspection is to be supplemented by radiography or other acceptable non-destructive crack or flaw detection methods. The extent of such examination is to be to the Surveyors' satisfaction, but particular attention is to be given to the following locations:-
- a) Junction and crossing of seams and butts in strength deck, sheer strake, side and bottom shell within 0.4 L amidships.
  - b) Butts of keel plating and rounded sheer strake within 0.4 L amidships.
  - c) Insert plates in way of hatch openings on the strength deck.
  - d) Butt of longitudinal framing and longitudinal bulkhead stiffeners with 0.4 L amidships.

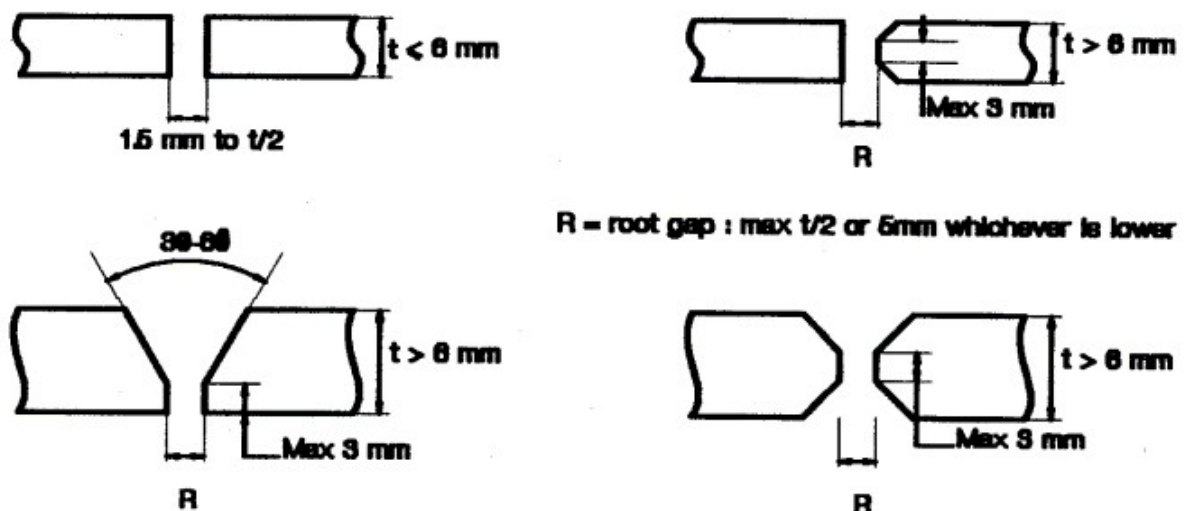
- 2.6.4 Defective sections of welds as found by visual or non-destructive examination or leakage under hydrostatic tests, are to be gouged out as necessary and carefully re-welded.

### Section 3

#### Welded Connections

#### 3.1 Butt welds

- 3.1.1 Plates of equal thickness may be manually butt welded as per Fig. 3.1.1. For automatic welding procedure will be specially considered.
- 3.1.2 For joints of plates with difference in thickness of more than 4 (mm), the thicker plate is to be tapered. The taper is not to exceed 1:3. Edge preparation after the tapering is to be as indicated in Sec. 3.1.1.
- 3.1.3 All manual butt welds are normally to be welded from both sides. Where a back ceiling run is not practicable or in certain cases when the stress level in the members is very low, welding on one side may be permitted provided the welding process is found satisfactory.
- 3.1.4 Where stiffening members, attached by continuous fillet welds, cross the finished butt or seam welds, these welds are to be made flush in way of the faying surface. Similarly for butt welds in webs of stiffening members, the butt weld is to be first completed and made flush with the stiffening member before the stiffener is connected to the plating by filled weld. The ends of the flush portion are to run on smoothly without notches or any sudden change of section. Where such conditions cannot be complied with, a scallop is to be arranged in the web of the stiffening member. Scallops are to be of such size and is such a position, that a satisfactory weld



**Fig.3.1.1 : Manually welded butt joints**

can be made.

### Figure

#### 3.2 'T' Connections

3.2.1 The throat thickness (See Fig. 3.2.1) of the fillet welds is given by:-

Throat thickness =  $t_p \cdot \text{weld factor} \cdot d/s$

$t_p$  = thickness (mm) of the thinner of the two parts being connected.

$d$  = distance (mm), between the successive weld fillets.

$s$  = length (mm), of the correctly proportioned weld fillets, clear of the end craters is not to be less than 75 (mm).

The weld factors for various connections are generally to be as given in Table – 3.2.1.

Where an approved automatic deep penetration procedure is used, the weld factors may be reduced by 15 percent.

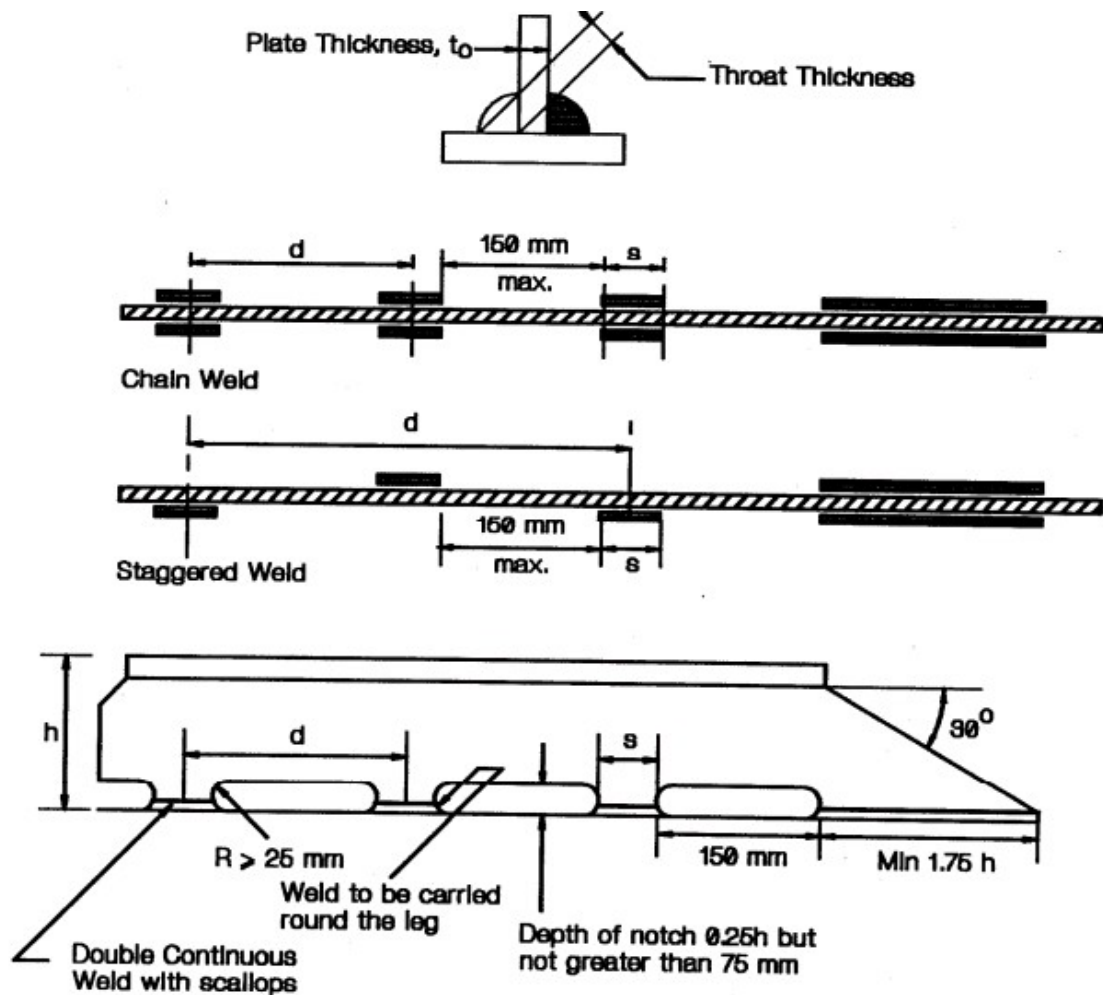


Fig.3.2.1 : Fillet welds

Figure

3.2.2 The throat thickness is not to be less than 3.0 (mm) and generally not to be greater than  $0.44 t_p$  for double continuous welds and the greater of  $0.44 t_p$  or 4.5 (mm) for intermittent welds.

**Table 3.2.1: Weld factors for fillet welds**

|                                 | Structural Items               | Weld Factors | d.c. | Int. weld | Remarks |
|---------------------------------|--------------------------------|--------------|------|-----------|---------|
| <b>Single Bottom</b>            |                                |              |      |           |         |
| Center girder                   | to keel plate or bar keel      | 0.3          | *    |           |         |
|                                 | to face plate                  | 0.15         |      | *         |         |
| Side girder                     | to bottom shell                | 0.15         |      | *         |         |
|                                 | to face plate                  | 0.13         |      | *         |         |
|                                 | to floors                      | 0.20         |      | *         |         |
| Floors                          | to keel plate                  | 0.15         | *    |           |         |
|                                 | to shell plating               | 0.15         |      | *         |         |
|                                 | to center girder               | 0.35         | *    |           |         |
|                                 | to longitudinal bullheads      | 0.35         | *    |           |         |
|                                 | to face plate                  | 0.15         |      | *         |         |
|                                 | stern tube covering            | 0.15         | *    |           |         |
| Bottom longitudinal             | to shell plating               | 0.13         |      | *         |         |
| <b>Double Bottom See Note 1</b> |                                |              |      |           |         |
| Center girder or duct keel      | to keel plate                  | 0.3          | *    |           |         |
|                                 | to inner bottom                | 0.25         |      | *         |         |
| Side girder                     | to bottom shell                | 0.15         |      | *         |         |
|                                 | to inner bottom                | 0.15         |      | *         |         |
|                                 | to floors                      | 0.15         |      | *         |         |
| Floors                          | to shell plating               | 0.15         |      | *         |         |
|                                 | to inner bottom / margin plate | 0.15         |      | *         |         |
|                                 | to center girder / keel plate  | 0.20         |      | *         |         |

|                                 |                                |      |   |   |  |
|---------------------------------|--------------------------------|------|---|---|--|
| Margin plate                    | to shell plating               | 0.4  | * |   |  |
|                                 | to inner bottom                | 0.4  | * |   |  |
| Inner bottom                    | to side shell                  | 0.4  | * |   |  |
| Tank side brackets              | to shell plating               | 0.3  |   |   |  |
|                                 | to margin plate                | 0.3  |   |   |  |
| Bracket floor                   | to inner bottom / bottom shell | 0.15 |   |   |  |
|                                 | to center girder               | 0.25 |   |   |  |
|                                 | to side shell / margin plate   | 0.25 |   |   |  |
| Bottom frames                   | to shell plating               | 0.13 |   |   |  |
| Reverse frames                  | to inner bottom                | 0.13 |   |   |  |
| Longitudinal                    | to shell plating               | 0.13 |   |   |  |
|                                 | to inner bottom                | 0.13 |   |   |  |
| Tank boundaries and bilge wells |                                | 0.40 | * |   |  |
| Stiffeners                      | to floors and girders          | 0.13 |   | * |  |

|                                     | Structural Items   | Weld Factors | d.c. | Int. weld | Remarks |
|-------------------------------------|--|--------------|------|-----------|---------|
| <b>Structure in Machinery Space</b> |  |              |      |           |         |
| Floors and girders                  | to shell & inner bottom  | 0.3          | *    |           |         |
|                                     | to face plate  | 0.2          |      | *         |         |
| Transverse & longitudinal frames    | to shell plating   | 0.15         |      | *         |         |
| Floors                              | to center girder in way of engine, thrust blocks & boiler seating. |              |      |           |         |
|                                     | - in single bottom   | 0.50         | *    |           |         |
|                                     | - in double bottom   | 0.30         | *    |           |         |

|                                |                                    |       |   |   |              |
|--------------------------------|------------------------------------|-------|---|---|--------------|
| Main engine foundation girders | to top plate                       | 0.5   | * |   | See note 2   |
|                                | to hull structure                  | 0.4   | * |   |              |
| Floors                         | to engine girder                   | 0.4   | * |   |              |
| Brackets etc                   | to engine girders                  | 0.3   | * |   |              |
| <b>Side Structure</b>          |                                    |       |   |   |              |
| Transverse frames              | To side shell                      |       |   |   |              |
|                                | - in tanks                         | 0.13  |   |   |              |
|                                | - elsewhere                        | 0.11  |   |   |              |
| Side longitudinal              | To shell plating                   | 0.13  |   |   |              |
| Web frames & side stringers    | To shell plating                   |       |   |   |              |
|                                | - within 0.2 x span from ends      | 0.35  | * |   |              |
|                                | - elsewhere                        | 0.20  |   | * |              |
|                                | To face plate and tripping bracket | 0.15  |   | * |              |
| Web frames                     | To side stringers                  | 0.3   | * |   |              |
| Bilge keel                     | To ground bars                     | 0.2   | * |   |              |
| Bilge keel ground bar          | To side shell                      | 0.35  | * |   | Single cont. |
| <b>Deck Structure</b>          |                                    |       |   |   |              |
| Strength deck                  | to shell                           | F. P. |   |   | See Note 3   |
| Other decks                    | To shell and bulkheads             | 0.3   | - |   | Generally    |
| Deck beams                     | To deck plating                    |       |   |   |              |
|                                | - in tanks                         | 0.13  |   | * |              |
|                                | - elsewhere                        | 0.11  |   | * |              |
| Deck longitudinal              | to decks                           | 0.13  |   | * |              |
| Deck girders                   | to deck plating                    |       |   |   |              |

|                 |   |      |   |   |  |
|-----------------|---|------|---|---|--|
|                 | - within 0.2 x span from ends                                 | 0.35 | * |   |  |
|                 | - elsewhere   | 0.20 |   | * |  |
|                 | to face plating and tripping brackets                         | 0.15 |   | * |  |
| Cantilever webs | to shell, decks, face plates and longitudinal girders at ends | 0.35 | * |   |  |
| Pillars         | to decks, inner bottom and pillar brackets                    | 0.40 | * |   |  |

|  | Structural Items                                   | Weld Factors | d.c. | Int. weld | Remarks         |
|--|--|--------------|------|-----------|-----------------|
| <b>Construction of 0.25 L from F. P.</b> |  |              |      |           |                 |
| Floors and girders                       | to shell & inner bottom                            | 0.25         | *    |           |                 |
|  | to face plate                                      | 0.25         |      | *         |                 |
| Bottom longitudinal                      | to shell plating                                   | 0.15         |      | *         |                 |
| Shell                                    | to transverse & longitudinal side framing          | 0.15         |      | *         |                 |
| Panting stringers                        | To shell & frames                                  | 0.30         | *    |           |                 |
| All internal structure                   | In fore peak (unless a higher factor is specified) | 0.13         |      | *         |                 |
| <b>Aft Peak Construction</b>             |  |              |      |           |                 |
| All internal structure                   | On bottom, side shell & aft peak bulkhead          | 0.3          | *    |           | See 3.2.5       |
| <b>Bulkheads and Partitions</b>          |  |              |      |           |                 |
| Boundaries of                            | Watertight, oil tight and wash bulkheads and shaft | 0.4          | *    |           | To be specially |

|   |                                     |      |   |   |   |
|---|-------------------------------------|------|---|---|---|
|   | tunnels                             |      |   |   | considered<br>for chemical<br>cargo tanks |
| Stiffeners  | On tank & wash<br>bulkheads         | 0.13 |   | * |   |
|   | On pillar bulkheads                 | 0.13 |   | * |   |
|   | On ordinary bulkheads               | 0.11 |   | * |   |
| Vertical &<br>horizontal<br>girders in tanks<br>& wash<br>bulkheads | To bulkhead plating                 |      |   |   |   |
|   | - within 0.2 x span from<br>ends    | 0.40 | * |   |   |
|   | - elsewhere                         | 0.40 |   | * |   |
|   | - to faceplate                      | 0.30 |   | * |   |
|   | - to tripping brackets              | 0.30 |   | * |   |
| Vertical &<br>horizontal<br>girders<br>elsewhere                    | to bulkhead plating                 | 0.15 |   |   |   |
|   | - within 0.2 x span from<br>ends    | 0.35 | * |   |   |
|   | - elsewhere                         | 0.20 |   | * |   |
|   | to faceplate & tripping<br>brackets | 0.15 |   | * |   |
| <b>Primary Structures in Cargo Tanks</b>                            |                                     |      |   |   |   |
| Webs  | To shell deck &<br>bulkheads        |      |   |   |   |
|   | - within 0.2 x span from<br>ends    | 0.4  | * |   |   |
|   | - elsewhere                         | 0.3  | * | * |   |



|   |  |      |   |   |  |
|---|--|------|---|---|--|
| Webs                                    | To face plates                                 | 0.3  | * |   |  |
| Webs                                    | - to webs of other primary members             | 0.3  | * |   |  |
| Boundaries                              | - to tripping brackets                         | 0.15 |   | * |  |
| <b>Superstructures &amp; deckhouses</b> |  |      |   |   |  |
| External bulkheads                      | to deck  |      |   |   |  |
|   | - on 1 <sup>st</sup> and 2 <sup>nd</sup> tiers | 0.40 | * |   |  |
|   | - elsewhere                                    | 0.25 | * |   |  |
| Internal bulkheads                      | boundaries                                     | 0.13 |   | * |  |
| Stiffeners                              | to external bulkheads                          | 0.10 |   | * |  |

|  | <b>Structural Items</b>   | <b>Weld Factors</b> | <b>d.c.</b> | <b>Int. weld</b> | <b>Remarks</b> |
|--|---------------------------|---------------------|-------------|------------------|----------------|
| <b>Hatchways and closing appliances</b>      |                           |                     |             |                  |                |
| Hatch coaming                                | To deck all corners       | 0.5                 | *           |                  |                |
|  | To deck elsewhere         | 0.4                 | *           |                  |                |
|  | To face plate             | 0.4                 | *           |                  |                |
|  | To hatch cover rest bar   | 0.16                | *           |                  |                |
| Hatch cover                                  | To stiffeners             | 0.12                |             | *                |                |
| <b>Rudders &amp; Nozzles</b>                 |                           |                     |             |                  |                |
| Rudders                                      |                           |                     |             |                  | See note 4     |
| Main piece members                           | To coupling flange        | F. P.               | *           |                  |                |
|  | To each other             | 0.44                | *           |                  |                |
| Rudder plating                               | To rudder webs, elsewhere | 0.20                | *           |                  |                |
| Nozzles                                      | Generally as for rudders  |                     |             |                  |                |
| <b>Miscellaneous fitting &amp; equipment</b> |                           |                     |             |                  |                |
| Framing ring for manhole                     | To deck & bulkhead        | 0.4                 | *           |                  |                |

|  |   |       |   |   |  |
|--|---|-------|---|---|--|
| type covers  |   |       |   |   |  |
| Framing<br>around ports<br>and W. T. / out<br>tight door   | Plating   | 0.4   | * |   |  |
| Sea-chest<br>boundary<br>welds   | To plating  | 0.4   | * |   |  |
|  | elsewhere   | 0.4   | * |   |  |
| Ventilators, air<br>pipes etc.   | To deck   | 0.4   | * |   |  |
| Bulwark stays  | To deck   | 0.4   | * |   |  |
|  | To bulwark plating  | 0.2   |   | * |  |
| Fabricated<br>anchors  |   | F. P. |   |   |  |
| Masts, derrick posts, crane pedestals, deck<br>machinery & mooring equipment seating –<br>to deck etc. | To be considered in each individual case  |       |   |   |  |
| d. c.  | double continuous   |       |   |   |  |
| F. p.  | Full penetration  |       |   |   |  |
| Note 1   | For tank boundaries see 3.2.5   |       |   |   |  |
| Note 2   | Preferably to be deep penetration or full penetration weld depending on the<br>thickness of the engine girders. |       |   |   |  |
| Note 3   | Generally full penetration, but alternative proposals may be considered.  |       |   |   |  |
| Note 4   | See Chapter 12, Section 4.1   |       |   |   |  |

3.2.3 The leg length is not to be less than 2 times the specified throat thickness.

3.2.4 Where the connection is highly stressed, deep penetration or full penetration welding may be required. Where full penetration welding required, the abutting plate may require to be beveled.

3.2.5 Continuous welding is to be adopted in the following locations and in any other region of high dynamic loading:-

- a) Boundaries of weather tight decks and erections, including hatch coamings, companion ways and other openings.
  - b) Boundaries of tanks and water tight compartments.
  - c) All structures in the after peak and the after peak bulkheads stiffeners.
  - d) All framing within holds of bulk carriers intended for carriage of coal.
  - e) All welding inside tanks intended for chemicals or edible liquid cargoes.
  - f) All lap welds in tanks.
  - g) Primary and secondary members to plating in way of end connections and end brackets to plating in the case of lap connection.
  - h) Other connections as given in Table 3.2.1.
- 3.2.6 Where intermittent welding is used, the welding is to be made continuous around the ends of brackets, lugs, scallops and at other orthogonal connections with other members. In tanks for water ballast, cargo oil or fresh water, only scalloped welding is to be used.
- 3.2.7 Where structural members pass through the boundary of a tank, and leakage into the adjacent space could be hazardous or undesirable, full penetration welding is to be adopted for the members for at least 150 (mm) on each side of the boundary. Alternatively, a small scallop of suitable shape may be cut in the member close to the boundary outside the compartment, and carefully welded all round.
- 3.3 Lap Connections**
- 3.3.1 Overlaps are not to be used to connect plates which may be subjected to high tensile or compressive loading. However, where they are adopted, the width of overlap is to be adequate to ensure a good weld, the surfaces are to be in close contact and the joints should be closed all round by continuous fillet weld.
- 3.4 Slot Weld**
- 3.4.1 For the connection of plating to internal webs, where access for welding is not practicable, the closing plating is to be attached by continuous full penetration or slot welds to flat bars fitted to the webs. Slots are to be well rounded at ends, to have a minimum length of 75 (mm) and in general, minimum width of twice the plating thickness. The distance between the slots is not to exceed 150 (mm). Complete filling of the slots is normally not permitted.

**3.5 End connection**

- 3.5.1 In way of the end connections of girders double continuous welding is to be used all around. The weld area is not to be less than the cross-sectional area of the member, and the throat thickness not less than that given by Table 3.2.1 for girder ends.
- 3.5.2 Where stiffeners have bracketed end connections, bracket arms are to be welded all around and the throat thickness is not to be less than 0.35 times the thickness of brackets.
- 3.5.3 Where stiffeners are continuous at girders, they are to be connected to the webs, either directly and / or by means of lugs. The weld area is to be such that the shear stress does not exceed  $80/k$  ( $N/mm^2$ ). Where the shear forces are high, a double sided connection to the web and / or a web stiffener welded on top of the continuous stiffener may be required.

**End of chapter**

**Chapter 15**  
**Hull Inspection, Workmanship and Testing**  
**Contents**

**Section**

- 1 Hull Inspection
- 2 Workmanship
- 3 Testing

**Section 1**  
**Hull Inspection**

**1.1 Approval of works**

- 1.1.1 The builders, intending to class vessels to be build at their yard with classification society, are to demonstrate their capability to carry out the fabrication to acceptable quality standards before the commencement of the fabrication. Similar approval procedure shall apply to subcontractor's works also. Previous experience in the building and repair of relevant structures and equipment can be considered favorably in this regard.

**1.2 Inspection facilities**

- 1.2.1 Adequate facilities are to be provided to enable the Surveyor to carry out a satisfactory inspection of all components during each stage of prefabrication and construction.

**Section 2**  
**Workmanship**

**2.1 General**

- 2.1.1 All workmanship is to be good quality and in accordance with good ship building practice. Any defect is to be rectified to the satisfaction of the Surveyor before being covered with paint, cement or other composition.
- 2.1.2 The assembly sequence and welding sequence are to be agreed prior to construction and are to be to the satisfaction of the Surveyor.

**2.2 Plate edges and cut-outs**

- 2.2.1 Openings, holes and other cut-outs in the main structural components are to be rounded off by adequately large radii. The free edges of cut-outs, hatch corners etc. are to be properly prepared and are to be free from notches. All edges should be faired.

**2.3 Cold forming**

- 2.3.1 Flanging and bending of plates while cold forming are not to have an average bending radius less than three times the plating thickness. The minimum radius is not to be less than twice the plating thickness.
- 2.3.2 During joggling of plates and profiles, the depth of joggle is not to be less than four times and the bending radius not less than twice the web thickness.

**2.4 Hammering, bending and straightening**

- 2.4.1 Steel being worked on when hot, is not to be over heated, and it is to be hammered and bent in the appropriate heat condition. Steel which is burnt, is not to be used.
- 2.4.2 Flame heating may be employed to straighten buckled plating when the buckling is not severe.

**Section 3****Testing****3.1 Definitions**

- 3.1.1 *Shop primer* is a thin coating applied after surface preparation and prior to fabrication as a protection against corrosion during fabrication.
- Protective coating is a final coating protecting the structure from corrosion.
- 3.1.2 *Structural testing* is a hydrostatic test carried out to demonstrate the tightness of the tanks and the structural adequacy of the design. Where practical limitations prevail and hydrostatic testing is not feasible (for example when it is difficult, in practice, to apply the required head at the top of the tank), hydro-pneumatic testing may be carried out instead. When a hydro-pneumatic testing is performed, the conditions should simulate, as far as practicable, the actual loading of the tank.
- 3.1.3 *Hydro-pneumatic testing* is a combination of hydrostatic and air testing, consisting of filling the tank with water up to its top and applying an additional air pressure. The value of the additional air pressure is to be at least as defined in Sec. 3.4.

3.1.4 *Leak testing* is an air or other medium test carried out to demonstrate the tightness of the structure.

3.1.5 *Hose testing* is carried out to demonstrate the tightness of the structural items not subjected to hydrostatic or leak testing and to other components which contribute to the water tight or weather tight integrity of the hull.

### **3.2 Application**

The requirements of this Section apply to:-

- Tanks, including independent tanks
- Water tight or weather tight structures.

The purpose of these tests is to check the tightness and / or the strength of structural elements. Tests are to be carried out in the presence of the Surveyor at a stage sufficiently close to completion so that any subsequent work would not impair the strength and tightness of the structure.

For the general testing requirements, see Sec. 3.8 and Sec. 3.9.

### **3.3 Structural testing**

3.3.1 Structural testing as required in Table 3.3.1 may be carried out before or after launching. Shop primer may be applied before carrying out the structural testing.

3.3.2 Structural testing may be carried out after the protective coating has been applied, provided that one of the following two conditions is satisfied:-

- a) All the welds are completed and carefully inspected visually to the satisfaction of the Surveyor, prior to the application of the protective coating.
- b) Leak testing is carried out prior to the application of the protective coating.

However, when leak testing is not carried out, protective coating in way of the following welds should be applied only after the structural testing has been satisfactorily completed:-

- All erection welds, both manual and automatic.
- All manual fillet weld connections on tank boundaries and manual penetration welds.

### **3.4 Leak testing**

3.4.1 Where leak testing is carried out in accordance with Table 3.3.1, air pressure as indicated in Table 3.4.1 is to be applied during the test.

Prior to inspection, it is recommended that the air pressure in the tank is raised as indicated in Table 3.4.1 and kept at this level for about 1 hour to reach a stabilized

state, with a minimum number of personnel in the vicinity of the tank, and then lowered to the test pressure.

3.4.2 Welds are to be coated with an efficient indicating liquid.

3.4.3 A U-tube filled with water up to a height corresponding to the test pressure is to be fitted to avoid over pressure of the compartment tested and to verify the test pressure. The U-tube should have a cross section larger than that of the pipe supply in air.

In addition, the test pressure is also to be verified by means of one master pressure gauge. Alternative means which are considered to be equally reliable, may be accepted.

3.4.4 Where leak testing is carried out it should be prior to the application of a protective coating, on all fillet weld connections on tank boundaries, penetrations and erection welds on tank boundaries excepting welds made by automatic processes. Selected locations of automatic erection welds and pre-erection manual or automatic welds may require to be similarly tested at the discretion of the Surveyor, taking account of the quality control procedures operating in the shipyard. For other welds, leak testing may be carried out after the protective coating has been applied, provided that these welds were carefully inspected visually to the satisfaction of the Surveyor. Any other recognized method may be accepted to the satisfaction of the Surveyor.

### **3.5 Hose testing**

When hose testing is required to verify the tightness of the structures, as defined in Table 3.3.1, a minimum pressure in hose of at least  $0.2 \text{ (N/m}^2\text{)}$  is to be applied at a maximum distance of 1.5 (m). The nozzle diameter is not to be less than 12 (mm).

### **3.6 Hydro-pneumatic testing**

When hydro-pneumatic testing is performed, the same safety precautions as for leak testing (See Sec. 3.4) are to be adopted.

### **3.7 Other testing methods**

Other testing methods may be accepted, at the discretion of IRS, based upon equivalency considerations.

### **3.8 General testing requirements**

General requirements for testing are given in Table 3.3.1.

### **3.9 Additional requirements for special type vessels / tanks**

In addition to the requirements of Table 3.3.1, particular requirements for testing of certain spaces within the cargo area of following types of vessels are given in Table 3.9.1.

- Edible Liquid Carriers
- Chemical carriers



These requirements intend generally to verify the adequacy of the structural design of the tank, based on the loading conditions on which the scantlings of the tank structure were determined.

**Table 3.3.1 : General testing requirements**

| Item number | Structure to be tested                | Type of testing                   | Structural test pressure   | Remarks   |
|-------------|---------------------------------------|-----------------------------------|--|---|
| 1           | Double bottom tanks                   | Structural testing <sup>(a)</sup> | The greater of the following:-<br>- head of water up to the top of overflow.<br>- head of water up to the upper most continuous deck   | Tank boundaries tested from at least one side                           |
| 2           | Double side tanks                     | Structural testing <sup>(a)</sup> | The greater of the following:-<br>- head of water up to the top of over flow<br>- 1.0 (m) head of water above highest point of tank.   | Tank boundaries tested from at least one side                           |
| 3           | Tank bulkheads, deep tanks            | Structural testing <sup>(a)</sup> | The greater of the following:-<br>- head of water up to the top of overflow.<br>- 1.0 (m) head of water above highest point of tank<br>- setting pressure of the safety relief valves, where relevant. | Tank boundaries tested from at least one side                           |
|             | Fuel oil bunkers                      | Structural testing <sup>(a)</sup> |  |   |
| 4           | Fore peak and after peak used as tank | Structural testing                | The greater of the following:-<br>- head of water up to the top of overflow<br>- 1.0 (m) head of water above highest point of tank   | Test of the after peak carried out after the stern tube has been fitted |

|    |  |                                   |   |  |
|----|--|-----------------------------------|---|--|
|    | Fore peak not used as tank                         | Structural testing                | - head of water up to the uppermost continuous deck for cargo vessels and bulkhead deck for passengers              |  |
|    | After peak not used as tank                        | Leak testing                      |   |  |
| 5  | Water tight bulkheads                              | Hose testing <sup>(c)</sup>       |   | Through inspection of bulkhead to be carried out |
| 6  | Watertight doors below free board or bulkhead deck | Structural testing <sup>(e)</sup> | - water pressure head up to the uppermost continuous deck for cargo vessels and bulkhead deck for passenger vessels |  |
| 7  | Double plate rudders                               | Leak testing                      |   |  |
| 8  | Shaft tunnel clear of deep tanks                   | Hose testing                      |   |  |
| 9  | Shell doors  | Hose testing                      |   |  |
| 10 | Weather tight hatch covers and closing appliances  | Hose testing                      |   |  |
| 11 | Chain locker (if aft of collision bulkhead)        | Structural testing                | Head of water up to the top   |  |
| 12 | Independent tanks                                  | Structural testing                | Head of water up to the top of overflow, but not less than 0.9 (m)  |  |

| 13  | Ballast ducts | Structural testing | Ballast pump maximum pressure |  |
|---|---------------|--------------------|-------------------------------|--|
| <p>(a) Leak or hydro-pneumatic testing may be accepted under the conditions specified in 3.4, provided that at least one tank for each type is structurally tested. This however, does not apply to cargo space boundaries in tankers and tanks for segregated cargoes or pollutants. If the structural test reveals weakness or severe faults not detected by the leak test, all tanks are to be structurally tested.</p> <p>(b) Where applicable, the highest point of tank is to be measured to the deck and excluding hatches.</p> <p>(c) When hose test cannot be performed without damaging possible outfitting (machinery, cables, switchboards, insulation, etc.) already installed, it may be replaced, at the discretion of IRS by a careful visual inspection of all the crossings and welded joints; where necessary, dye penetration test or ultrasonic leak test may be required.</p> <p>(d) The test may be made before or after the door is fitted. In case test is done before, hose testing is to be carried out in place after the door is fitted.</p> |               |                    |                               |  |

| <b>Table 3.9.1 : Additional testing requirements for spaces within the cargo area of certain types of ships</b> |                         |                                |   |  |                |
|---|-------------------------|--------------------------------|---|--|----------------|
| <b>Item No.</b>   | <b>Types of vessels</b> | <b>Structures to be tested</b> | <b>Testing requirements</b>   | <b>Structural test pressure</b>  | <b>Remarks</b> |
| 1   | Edible liquid carriers  | Independent tanks              | Structural testing  | Head of water up to the top of over flow without being less than 0.9 (m)   |                |
| 2   | Chemical carriers       | Integral or independent tanks  | Structural testing of cargo tanks boundaries from at least one side | The greater of the following:- <ul style="list-style-type: none"> <li>- 1.0 (m) head of water above highest point of tank.</li> <li>- Setting pressure of the safety relief valves, where relevant.</li> </ul> |                |

**End of Chapter**

# **PART B**

# **STABILITY**

# **REQUIREMENTS**

**Intact and Damage Stability requirements and any other related rules for vessels operating in Inland Waters to be applicable as per IRS and / or any IACS Classification Society Rules and / or IWAI model rules as applicable may be accepted for Inland Vessels.**

**Intact Stability Requirements for Vessels operating in Inland Waters****Chapter 1****Rule 1****GENERAL**

- 1 The purpose of this Annexure on Intact Stability is to recommend stability criteria and other measures for ensuring the safe operation of all vessels to minimize the risk to such vessels, to the personnel on board and to the environment.
- 2 Application.
  - 2.1 This Code contains intact stability criteria for the following types of vessels.
    - Cargo vessels
    - Cargo vessels carrying timber deck cargo
    - Cargo vessels carrying grain in bulk
    - Passenger vessels
    - Pontoons
    - Cargo vessels carrying containers on deck and container vessels
  - 2.2 The requirements for vessels of novel design or vessels not otherwise covered shall be specially considered.
- 3 Definitions

For the purpose of this Annexure the definition given here under apply. For terms used, but not defined herein, the definitions as given Chap. 1 apply.

  - 3.1 An air-cushion vehicle is a craft such that the whole or a significant part of its weight can be supported, whether at rest or in motion, by a continuously generated cushion of air dependent for its effectiveness on the proximity of the surface over which the craft operates.
  - 3.2 A hydrofoil boat is a craft which is supported above the water surface in normal operating conditions by hydrodynamic forces generated on foils.
  - 3.3 A side wall craft is an air-cushion vehicle whose wall extending along the sides are permanently immersed hard structures.
  - 3.4 A container vessel means a vessel which is used primarily for the transport of marine containers.

**CHAPTER 2****Rule 1****Stability booklet**

1. Stability data and associated plans should be drawn up in the working language of the vessels and any other language the Administration may require. All translations of the stability booklet should be approved.
2. Each vessels should be provided with a stability booklet, approved by the Administration, which contains sufficient information to enable the master to operate the vessel in compliance with the applicable requirements contained in this Annexure. The Administration may have additional requirements. The stability booklet may include information on longitudinal strength, where required. The Annexure addresses only the stability – related contents of the booklet.
3. The format of the stability booklet and the information included will vary dependent on the vessel type and operation. In developing the stability booklet, consideration should be given to including the following information:-
  1. A general description of the vessel;
  2. Instructions on the use of the booklet;
  3. General arrangement plans showing water tight compartments, closures, vents, down flooding angles, permanent ballast, allowable deck loadings and free board diagrams;\
  4. Hydrostatic curves or tables and cross curves of stability calculated on a free-trimming basis, for the ranges of displacement and trim anticipated in normal operating conditions;
  5. Capacity plan or tables showing capacities and centers of gravity for each cargo stowage space;
  6. Tank sounding tables showing capacities, centers of gravity, and free surface data for each tank;
  7. Information on loading restrictions, such as maximum KG or minimum GM curve or table that can be used to determine compliance with the applicable stability criteria;
  8. Standard operating conditions and examples for developing other acceptable loading conditions using the information contained in the stability booklet;
  9. A brief description of the stability calculations done including assumptions;
  10. General precautions for preventing unintentional flooding;

11. Information concerning the use of any special cross-flooding fittings with descriptions of damage conditions which may require cross-flooding;
12. Any other necessary guidance for the safe operation of the vessel under normal and emergency conditions;
13. A table of contents and index for each booklet;
14. Inclining test report for the vessel, or:-
  1. Where the stability data is based on a sister vessel, the inclining test report of that sister vessel along with the light ship measurement report for the vessel in question; or
  2. Where light ship particulars are determined by other methods than from inclining of the vessel or its sister, a summary of the method used to determine those particulars;
15. Recommendation for determination of vessel's stability by means of an in-service inclining test.
16. If permanent ballast is used, its location and weight should be noted in the vessel's stability booklet, it should be located such that it does not shift during the normal operation of the vessel. Permanent ballast should not be removed from the vessel or relocated within the vessel without the approval of the Administration.
17. As an alternative to the stability booklet mentioned in 3.6.1, a simplified booklet in an approved form containing sufficient information to enable the master to operate the vessel in compliance with the applicable provisions of the Code as may be provided at the discretion of the Administration concerned.

## **Rule 2**

### **General precautions against capsizing**

1. Compliance with the stability criteria does not ensure immunity against capsizing, regardless of the circumstances, or absolve the master from his responsibilities. Masters should therefore exercise prudence and good seamanship having regard to the season of the year, weather forecasts and the navigational zone and should take the appropriate action as to speed and course warranted by the prevailing circumstances.



2. Care should be taken that the cargo allocated to the vessel is capable of being stowed so that compliance with the criteria can be achieved. If necessary, the amount should be limited to the extent that ballast weight may be required.
3. Before a voyage commences, care should be taken to ensure that the cargo, sizeable pieces of equipment have been properly stowed or lashed so as to minimize the possibility of both longitudinal and lateral shifting, while at sea, under the effect of acceleration caused by rolling and pitching.
4. A vessel, when engaged in towing operations, should possess an adequate reserve of stability to withstand the anticipated heeling moment arising from the two line without endangering the towing vessel. Deck cargo on board the towing vessel should be positioned as not to endanger the safe working of the crew on deck or impede the proper functioning of the towing equipment and be properly secured. Towline arrangements should include towing springs and a method of quick release of the tow.
5. The number of partially filled or slack tanks should be kept to a minimum because of their adverse effect on stability.
6. The stability criteria contained in chapter 3 set minimum values, but no maximum values are recommended. It is advisable to avoid excessive values of meta-centric height, since these might lead to acceleration forces which could be prejudicial to the vessel, its complement, its equipment and to safe carriage of the cargo. Slack tanks may, in exceptional cases, be used as a means of reducing excessive values of meta-centric height. In such cases, due consideration should be given to sloshing effects.
7. Regard should be paid to the possible adverse effects on stability where certain bulk cargoes are carried.

### **Rule 3**

#### **Operational precautions in heavy weather**

1. All doorways and other openings, through which water can enter into the hull or deck houses, forecastle, etc., should be suitably closed in adverse weather conditions and accordingly all appliances for this purpose should be maintained on board and in good condition.
2. Weather tight and water tight hatches, doors, etc., should be kept closed during navigation, except when necessarily opened for the working of the vessel and should always be ready for immediate closure and be clearly marked to indicate that these

fittings are to be kept closed except for access. Hatch covers and flush deck scuttles in fishing vessels should be kept properly secured when not in use during fishing operations. All portable dead lights should be maintained in good condition and securely closed in bad weather.

3. Any closing devices provided for vent pipes to fuel tanks should be secured in bad weather.
4. In all conditions of loading necessary care should be taken to maintain the minimum freeboard.

### **Chapter 3**

#### **General Intact Stability Criteria for All Vessels**

1. The following general criteria are recommended for passenger and cargo vessels.
  - The meta-centric height GM should not be less than 0.15 m, for all the vessels.
  - Passenger vessels, with 2/3 rd of passengers crowded on one side on the upper most deck, the angle of heel should not exceed 10° and the vessel should have a positive meta-centric height.

For the purpose of this Rule the weight of the passenger is to be taken as 65 kgs.

  - The freeboard in case of passenger vessels, should not be less than 760 mm in all conditions of loading.
  - The maximum angle of heel of all self-propelled vessels during tuning at service speed fully loaded on account of turning shall not exceed 10°.
2. Provisions should be made for a safe margin of stability at all stages of the voyage, regard being given to additions of weight, such as those due to absorption of water and to losses of weight such as those due to consumption of fuel and stores.
3. For vessels carrying oil-based pollutants in bulk, the Administration should be satisfied that the criteria given in 3.1 is maintained during all loading and ballasting operations.

## Chapter 4

### Severe wind and rolling criterion (weather criterion)

1. This criterion supplements the stability criteria given in Chapter 3.
2. Weather criterion:-
  - a) The ability of a vessel to withstand the combined effects of beam wind and rolling should be demonstrated for each standard condition of loading, with reference to the figure as follows:-
    1. The vessel is subjected to a steady wind pressure acting perpendicular to the vessel's centerline which results in a steady wind heeling lever ( $lw_1$ ).
    2. From the resultant angle of equilibrium  $\theta_0$ , the vessel is assumed to roll owing to wave action to an angle of roll  $\theta_1$ , to windward. Attention should be paid to the effect of steady wind so that excessive resultant angles of heel are avoided;
    3. The vessel is then subjected to a gush wind pressure which results in a gush wind heeling lever ( $lw_2$ );
    4. Under these circumstances, area "b" should be equal to or greater than area "a";
    5. Free surface effects should be accounted for in the standard conditions of loading

The angles in the above figure are defined as follows:-

$\theta_0$  = angle of heel under action of steady wind.

$\theta_1$  = angle of roll of windward due to wave action

$\theta_2$  = angle of down flooding (qf) or  $50^\circ$  or  $q_c$ , whichever is less,

Where:-

$\theta_f$  = angle of heel at which openings in the hull super structures or deck houses which cannot be closed weather tight immerse. In applying this criterion, small openings through which progressive flooding cannot take place need not be considered as open.

$\theta_c$  = angle of second intercept between wind heeling lever  $lw_2$  and GZ curves.

- b) The wind heeling levers  $lw_1$  and  $lw_2$  referred above are constant values at all angles of inclination and should be calculated as follows:-

$lw_1 = (P \cdot A \cdot Z / 1000gD)(m)$  and

$lw_2 = 1.5 lw_1(m)$

Where:-

P = wind pressure of 504 Pa. The value of P used for vessels in restricted services may be reduced subjected to the approval of the administration;

A = Projected lateral area of the portion of the vessel and deck cargo above the water line ( $m^2$ )

Z = vertical distance from the center of A to the center of the underwater lateral area or approximately to a point at one half the mean draught (m);

D = displacement (t)

g = gravitational acceleration of  $9.81 \text{ m/s}^2$

c) The angle of roll ( $q_1$ ) referred to should be calculated as follows:-

$$q_1 = 109k.X_1.X_2(r.s)^{1/2} \text{ (degrees)}$$

Where:-

X1 = factor as shown in table 1

X2 = factor as shown in table 2

k = factor as follows:-

k = 1.0 for round-bilged vessel having no bilge or bar keels

k = 0.7 for a vessel having sharp bilges

k = as shown in table 3 for a vessel having bilge keels, a bar keel or both

$$r = 0.73 + 0.60 G/d$$

With:-

OG = distance between the center of gravity and the waterline (m) ( + if center of gravity is above the waterline, if it is below)

D = mean molded draught of the vessel (m)

S = factor as shown in table 4.

Table 1

Values of factor X1

| <b>B/d</b> | <b>X1</b> |
|------------|-----------|
| 2.4        | 1.00      |
| 2.5        | 0.98      |
| 2.6        | 0.96      |
| 2.7        | 0.95      |
| 2.8        | 0.93      |
| 2.9        | 0.91      |
| 3.0        | 0.90      |

|      |      |
|------|------|
| 3.1  | 0.88 |
| 3.2  | 0.86 |
| 3.3  | 0.84 |
| 3.4  | 0.82 |
| 0.35 | 0.80 |

Table 2

Values of factor X2

| <b>CB</b> | <b>X2</b> |
|-----------|-----------|
| <0.45     | 0.75      |
| 0.50      | 0.82      |
| 0.55      | 0.89      |
| 0.60      | 0.95      |
| 0.65      | 0.97      |
| >0.70     | 1.00      |

Table 3

Values of factor k

| <b>(Ak.100/LB)</b> | <b>K</b> |
|--------------------|----------|
| 0                  | 1.0      |
| 1.0                | 0.98     |
| 1.5                | 0.95     |
| 2.0                | 0.88     |
| 2.5                | 0.79     |
| 3.0                | 0.74     |
| 3.5                | 0.72     |
| 4.0                | 0.70     |

Table 4

Values of factor

| <b>T</b> | <b>S</b> |
|----------|----------|
| 6        | 0.100    |
| 7        | 0.098    |
| 8        | 0.093    |
| 12       | 0.065    |
| 14       | 0.053    |
| 16       | 0.044    |
| 18       | 0.038    |
| 20       | 0.035    |

(Intermediate values in table 1-4 should be obtained by linear interpolation.)

Rolling period  $1 = (2C B / (GM)^{1/2})$  (seconds)

Where:-

$C = 0.373 + 0.023 (B/d) - 0.043 (L/100)$ .

The symbols in the above table and formula for the rolling period are defined as follows:-

L = length of the vessel at water line (m)

B = molded breadth of the vessel (m)

d = mean molded draught of the vessel (m)

CB = block coefficient

A<sub>k</sub> = total over all area of bilge keels, or area of the lateral projection of the bar keel, or sum of these areas (m<sup>2</sup>)

GM = meta centric height corrected for free surface effect (m).

## **Rule 2**

### **Standard loading conditions to be examined**

1. Loading conditions:- The standard loading conditions referred to in the text are as follows:-

#### **For a passenger vessel:-**

1. Vessel in the fully loaded departure condition with full stores and fuel and with the full number of passengers with their luggage;

2. Vessel in the fully loaded arrival condition, with full member of passengers and their luggage but with only 10% stores and fuel remaining;
3. Vessel without cargo, but with full stores and fuel and the full number of passengers and their luggage.
4. Vessel in the same condition as at .03 above with only 10% stores and fuel remaining.

**For a cargo vessel:-**

1. Vessel in the fully loaded departure condition, with cargo homogeneously distributed throughout all cargo spaces and with full stores and fuel;
2. Vessel in the fully loaded arrival condition, with cargo homogenously distributed throughout all cargo spaces and with 10% stores and fuel remaining;
3. Vessel in ballast in the departure condition, without cargo but with full stores and fuel;
4. Vessel in ballast in the arrival condition, without cargo and with 100% stores and fuel remaining.

**For a cargo vessel intended to carry deck cargoes:-**

1. Vessel in the fully loaded departure condition with cargo homogenously distributed in the holds and with cargo specified in extension and mass on deck, with full stores and fuel;
2. Vessel in the fully loaded arrival condition with cargo homogenously distributed in holds and with a cargo specified in extension and mass on deck, with 10% stores and fuel.
2. A mass of 65 kg should be assumed for each passenger except that this value may be reduced to not less than 60 kg where this can be justified. In addition, the mass and distribution of the luggage should be determined by the Administration.
3. The height of the center of gravity for passengers should be assumed equal to:-
  - 1.0 m above deck level for passengers standing upright. Account may be taken, if necessary, of camber and sheer of deck;
  - 0.30 m above the seat in respect of seated passengers.
4. Passengers and luggage should be considered to be in the spaces normally at their disposal.
5. Passengers without luggage should be considered as distributed to produce the most unfavorable combination of passengers heeling moment and / or initial meta-centric height, which may be obtained in practice, when assessing compliance with the

criteria given in Chapter 3. In this connection, it is anticipated that a value higher than four persons per square-meter will not be necessary.

## Chapter 5

### Sub Division and Number of bulkheads

1. The requirements of the bulkheads are as follows:-
  - a) **Cargo Vessels:-** The number and location of bulkheads are to be as per Annexure 1.
  - b) **Passenger Vessels:-** The number of Bulkheads are to be as follows:-

| Length        | Machinery Aft | Machinery elsewhere |
|---------------|---------------|---------------------|
| $15 < L < 30$ | 3             | 3                   |
| $L > 30$      | 3             | 4                   |

Location of collision bulkhead is to be within the limits specified in Annexure 1

- c) **Pontoons:-** Minimum number of bulkheads is to be based on the damaged stability calculations to the satisfaction of the Administration.



**Determination of Lightship, Displacement and Center of Gravity and  
Guidance Information for conducting inclining Experiment**

**Chapter 1**

**Rule 1 Application**

1. Every vessel, passenger or cargo should be inclined upon its completion and the elements of its stability determined.
2. Where any alterations are made to a vessel so as to materially affect the stability, the vessel should be re-inclined.
3. At periodic interval not exceeding five years, a lightweight surveys should be carried out on all passenger vessels to verify any changes in lightship displacement and longitudinal center of gravity. The vessel should be re-inclined whenever, in comparison with the approved stability information, a deviation from the lightship displacement exceeding 2% or a deviation of the longitudinal center of gravity exceeding 1% of L is found, or anticipated.
4. The Administration may allow the inclining test of an individual vessel to be dispensed with provided basic stability data available from them. Including test of a sister vessel and it is shown to the satisfaction of the Administration that reliable stability information for the exempted vessel can be obtained from such basic data.
5. The Administration may allow the inclining test of an individual vessel or class of vessels especially designed for the carriage of liquids or ore in bulk to be dispensed with when reference to existing data for similar vessels clearly indicates that due to the vessel's proportions and arrangements more than sufficient meta-centric height will be available in all possible loading conditions.

**Chapter 2**

**Definitions**

For the purpose of this Annexure, unless expressly provided otherwise:-

1. Certification of the test weights is the verification of the weight marked on a test weight. Test weight should be certified using a certified scale. The weight should be

performed close enough in time to the inclining test to ensure the measured weight is accurate.

2. Draught is the vertical distance from the molded baseline to the waterline.
3. The inclining test involves moving a series of known weights, normally in the transverse direction, and then measuring the resulting change in the equilibrium heel angle of the vessel. By using this information and applying basic naval architecture principles, the vessel's vertical center of gravity (VCG) is determined.
4. Lightship condition is a vessel complete in all respects, but without consumables, stores, cargo, crew and effects, and without any liquids on board except that machinery and piping fluids, such as lubricants and hydraulics, are at operating levels.
5. A Lightweight survey involves taking an audit of all items which should be added, deducted or relocated on the vessel at the time of the inclining test so that the observed conditions of the vessel can be adjusted to the lightship condition. The weight, longitudinal, transverse and vertical location of each item should be accurately determined and recorded. Using this information, the static waterline of the vessel at the time of the inclining test as determined from measuring the free board or verified draught marks of the vessel, the vessels hydrostatic data, and the sea water density, the lightship displacement and longitudinal center of gravity (LCG) can be obtained. The transverse center of gravity (TCG) may also be determined for vessels which are asymmetrical about the centerline or whose internal arrangement or outfitting is such that an inherent list may develop from off-center weight.

### **Chapter 3**

#### **Rule 1**

#### **Preparation for the Inclining Test**

##### **1. Notification of the Administration**

Written notification of the inclining test should be sent to the Administration as it requires or in due time before the test. An Administration representative should be present to witness the inclining test and the test results are submitted for review.

The responsibility for making preparations, conducting the inclining test and lightweight survey, recording the data, and calculating the results rests with the shipyard, owner or naval architect. While compliance with the procedures outlined herein will facilitate an expeditious and accurate inclining test, it is recognized that alternative procedures or arrangements may be equally efficient. However, to

minimize the risk of delay, it is recommended that all such variances be submitted to the Administration for review prior to the inclining test.

**Details of notification**

Written notification, should provide the following information as the Administration may require:-

1. Identification of the vessel by name and shipyard hull number, if applicable;
2. Date, time and location of the test;
3. Inclining weight data:-
  1. Type;
  2. Amount (Number of units and weight of each);
  3. Certification;
  4. Method of handling (i.e. sliding rail or crane);
  5. Anticipated maximum angle of heel to each side;
4. Measuring devices:-
  1. Pendulums – approximate location and length;
  2. U-tubes – approximate location and distance between legs;
  3. Inclinometers – location and details of approvals and calibrations.
5. Approximate trim;
6. Condition of tanks;
7. Estimated weights to deduct, to complete, and to relocate in order to place the vessel in its true lightship condition;
8. Detailed description of any computer software to be used to aid in calculation during the inclining test;
9. Name and phone number of the person responsible for conducting the inclining test.

**Rule 2**

**General condition of the vessels**

1. A vessel should be as complete as possible at the time of the inclining test. The test should be scheduled to minimize the disruption in the vessel's delivery date or its operational commitments.
2. The amount and type of work left to be completed (weights to be added) affect the accuracy of the lightship characteristics, so good judgment should be used. If the

weight or center of gravity of an item to be added cannot be determined with confidence, it is best to conduct the inclining test after the item is added.

3. Temporary material, tool boxes, staging, sand, debris etc. on board should be reduced to absolute minimum before the inclining test. Excess crew or personnel not directly involved in the inclining test should be removed from on board the vessel before the test.
4. Decks should be free of water. Water trapped on deck may shift and pocket in a fashion similar to liquids in a tank. Any rain, snow or ice accumulated on the vessel should be removed prior to the test.
5. The anticipated liquid loading for the test should be included in the planning for the test. Preferably, all tanks should be empty and clean, or completely full. The number of slack tanks should be kept to an absolute minimum. The viscosity of the fluid, the depth of the fluid and the shape-of the tank-should be such that the free surface effect can be accurately determined.
6. The vessel should be moored in a quiet, sheltered area free from extraneous forces such as propeller wash from passing vessels, or sudden discharges from shore side pumps. The tide conditions and the trim of the vessel during the test should be considered. Prior to the test, the depth of water should be measured and recorded in as many locations as are necessary to ensure that the vessel will not contact the bottom. The specific gravity of water should be accurately recorded. The vessel should be moored in a manner to allow unrestricted heeling. The access ramps should be removed. Power lines, hoses, etc., connected to shore should be at a minimum, and kept slack at all times.
7. The vessel should be as upright as possible and have sufficient draught so that any abrupt changes in the water plane will be avoided as the vessel is inclined from side to side. A deviation from design trim of up to 10 of L is normally acceptable when using hydrostatic data calculated at design trim. Otherwise, the hydrostatic data should be calculated for the actual trim. Caution should be exercised when applying the "1% rule of thumb" to ensure that excessive error, as would result from a significant change – in the water plane area during heeling, is not introduced into the stability calculations. With inclining weights in the initial position, up to one-half degree of list is acceptable.
8. The total weight used should be sufficient to provide a minimum inclination of one degree and a maximum of four degrees of heel to each side. The Administration may,

however, accept a smaller inclination angle for large vessels. Test weights should be compact and of such a configuration that the vertical center of gravity of the weights can be accurately determined. Each weight should be marked with an identification number and its weight. Re-certification of the test weights should be carried out prior to the inclining. A crane of sufficient capacity and reach, or some other means, should be available during the inclining test to shift weight on the deck-in an expeditious and safe manner, water ballast transfer may be carried out, when it is impractical, to incline using solid weights, if acceptable to the Administrator.

9. Two pendulums (minimum) should be used to allow identification of bad readings at any one pendulum station. They should each be located in an area protected from the wind. The pendulums should be long enough to give a measured deflection, to each side of upright, of at least 5 cm. To ensure recordings from individual instruments are kept separate, it is suggested that the pendulums be physically located as far apart as practical. One or more pendulums may be substituted by other measuring devices (U-tubes or inclinometers) at the discretion of the Administration.
10. Efficient two-way communications should, be provided between central control and the weight handlers and between center control and each pendulum station. One person at a central control station should have complete control over all personnel involved in the test.

### **Rule 3**

#### **Plans required**

1. The person in charge of the inclining test should have available a copy of the following plans at the time of the inclining test:-
  1. Lines plan
  2. Hydrostatic curves or hydrostatic data;
  3. General arrangement plan of decks, holds, inner bottoms, etc.;
  4. Capacity plan showing capacities and vertical and longitudinal centers of gravity of cargo spaces tanks, etc. When ballast water is used as inclining weights, the transverse and vertical centers of gravity for the applicable tanks, for each angle of inclination, must be available;
  5. Tank sounding tables;
  6. Draught mark locations; and
  7. Docking drawing with keel profile and draught mark corrections (if available)

**Rule 4****Test procedure**

1. Procedures followed in conducting the inclining test and light weight survey should be in accordance with the recommendations laid out in Chapter.
  1. Free board / draught readings should be taken to establish the position of the waterline in order to determine the displacement of the vessel at the time of the inclining test. It is recommended that at least five freeboard readings, approximately equally spaced, be taken on each side of the vessel or that all draught marks (forward, mid-ship and aft) be read on each side of the vessel.
  2. The standard test employs eight distinct weight movements. Movement No. 8, a recheck of the zero point, may be omitted if a straight line plot is achieved after Movement No. 7. If a straight line plot is achieved after the initial zero and six weight movements, movements, the inclining test is complete and the second check at zero may be omitted. If a straight line plot is not achieved, those weight movements that did not yield acceptable plotted points should be repeated or explained.
2. A copy of the inclining data should be forwarded to the Administration along with the calculated results of the inclining test in an acceptable report format, if required.
3. All calculations performed during the inclining test and in preparation of an inclining test report may be carried out by a suitable computer program. Output generated by such a program may be used for presentation of all or partial data and calculations included in the test report if it is clear, concise, well documented, and generally consistent in form and content with Administration requirements.

**Rule 5****Stability test for pontoons**

1. An inclining experiment is not normally required for a pontoon, provided a conservative value of the lightship vertical center of gravity (KG) is assumed for the stability calculations. The KG can be assumed at the level of the main deck although it is recognized that a lesser value could be acceptable if fully documented. The lightship displacement and longitudinal center of gravity should be determined by calculation based on draught and density readings.

## **Chapter 4**

### **DETAILED GUIDELINES FOR CONDUCT OF INCLINING TEST**

#### **Rule 1**

#### **INTRODUCTION**

This Chapter contains important detailed procedures for conducting an inclining test in order to ensure that valid results are obtained with maximum precision at a minimal cost to owners, shipyards and the Administrator. A complete understanding of the correct procedures used to perform an inclining test is imperative in order to ensure that the test is conducted properly and so that results can be examined for accuracy as the inclining experiment is conducted.

#### **1. Free surface and tank age**

1. If there are liquids on board the vessel when it is inclined, whether in the bilges or in the tanks, they will shift to the low side when the vessel heels. This shift of liquids will exaggerate the heel of the vessel. Unless the exact weight and distance of liquid shifted can be precisely calculated, the meta-centric height (GM) calculated from the inclining test will be in error. Free surface should be minimized by emptying the tanks completely and making sure all bilges are dry; or by completely filling the tanks so that no shift of liquid is possible. The latter method is not the optimum because air pockets are difficult to remove from between structural members of a tank, and the weight and center of the liquid in a full tank should be accurately determined in order to adjust the lightship values accordingly. When tanks must be left slack, it is desirable that the sides of the tanks be parallel vertical planes and the tanks be regular in shape, (i.e. rectangular, trapezoidal, etc.) when viewed from above, so that the free surface moment of the liquid can be accurately determined.

Free surface correction is independent of the height of the tank in the vessel, location of the tank, and direction of heel. As the width of the tank increases, the value of free surface moment increases by the third power. The distance available for the liquid to shift is the predominant factor. This is why even the smallest amount of liquid in the bottom of a wide tank or bilge is normally unacceptable and should be removed prior to the inclining experiment. Insignificant amounts of liquids in V-shaped tanks or voids (e. g. a chain locker in the bow), where the potential shift is negligible, may remain if removal of liquid would be difficult or would cause extensive delays.

When ballast water is used as inclining weight, the actual transverse and vertical movements of the liquid should be calculated taking into account the change of heel of the vessel. Free surface corrections as defined in this paragraph should not apply to the inclining tanks.

2. Pressed up tanks – "Pressed up" means completely full with no voids caused by trim or inadequate venting. Anything less than 100% full, for example the 98% condition regarded as full for operational purposes, is not acceptable. Preferably, the vessel should be roiled from side to side to eliminate entrapped air before taking the final sounding. Special care should be taken when pressing fuel oil tanks to prevent accidental pollution.
3. Empty tanks – It is generally not sufficient to simply pump tanks until suction is lost. Enter the tank after pumping to determine if final stripping with portable pumps or by hand is necessary.

The exceptions are very narrow tanks or tanks where there is a sharp dead rise, since free surface would be negligible. Since all empty tanks should be inspected, all manholes should be open and the tanks well ventilated and certified as safe for entry. A safe testing device should be on hand to test for sufficient oxygen and minimum toxic levels. A certified marine chemist's certificate certifying that all fuel oil and chemical tanks are safe for human entry should be available, if necessary.

## **2. Mooring arrangements**

The importance of good mooring arrangements cannot be over-emphasized. The arrangement selections will be dependent upon many factors. Among the most important are depth of water, wind and current effects. Whenever possible, the vessel should be moored in a quiet, sheltered area free from extraneous forces such as propeller wash from passing vessels or sudden discharges from shore side pumps. The depth of water under the hull should be sufficient to ensure that the hull will be entirely free of the bottom. The tide conditions and the trim of vessel during the test should be considered. Prior to the test, the depth of water should be measured and recorded-in as many locations to ensure the vessel will not contact the bottom. If marginal, the test should be conducted during high tide or the vessel moved to deeper water.

1. The mooring arrangement should ensure that the vessel will be free to list without restraint for a sufficient period of time to allow a satisfactory reading of the heeling angle, due to each weight shift, to be recorded.



2. The vessel should be held by lines at the bow and the stem, attached to bollards and / or cleats on the deck. If suitable restraint of the vessel cannot be achieved using deck fittings, then temporary pad eyes should be attached as close as possible to the center line of the vessel-and as near the waterline as practical. Where the vessel can be moored to one side only, it is good practice to supplement the bow and stern line with two sprint lines in order to maintain positive control of the vessel. The leads of the spring lines should be as long as practicable. Cylindrical camels should be provided between the vessel and the dock. All lines should be slack, with the vessel free of the pier and camels, when taking readings.

1. If the vessel is held off the pier by the combined effect of the wind and current, a superimposed heeling moment will act on the vessel through the test. For steady conditions this will not affect the results. Gusty wind or uniformly varying wind and / or current will cause these superimposed heeling moments to change, which may require additional test points to obtain a valid test. The need for additional test points can be determined by plotting test points as they are obtained.

2. If the vessel is pressed against the fenders by wind and / or current, all lines should be slack. The cylindrical camels will prevent binding but there will be an additional super imposed heeling moment due to the vessel bearing against the camels. This condition should be avoided where possible but, when used, consideration should be given to pulling the vessel free of the dock and camels and letting the vessel drift as readings are taken.

3. Another acceptable arrangement is where the combined wind and current are such that the vessel may be controlled by only one line at either the bow or the stern. In this case, the control line should be led from on or near the center line of the vessel with all lines but the control line slack, the vessel is free to veer with the wind and / or current as readings are taken. This can sometimes be troublesome because varying wind and / or current can cause distortion of the plot.

3. The mooring arrangement should be submitted to the approval authority for review prior to the test.
4. If a floating crane is used for handling inclining weights, it should not be moored to the vessel.

### **3. Test weights:-**

1. Weights, such as porous concrete, that can absorb significant amounts of moisture, should only be used if they are weighed just prior to the inclining test or if recent

weight certificates are presented. Each weight should be marked with an identification number and its weight. For small vessels, drums completely filled with water may be used. Drums should normally be full and capped to allow accurate weight control. In such cases, the weight of the drums should be verified in the presence of the Administration representatives using a recently calibrated scale.

2. Precaution should be taken to ensure that the decks are not overloaded during weight movements. If deck strength is questionable then a structural analysis should be performed to determine. If existing framing can support the weight.
3. Generally the test weights should be positioned as far outboard as possible on the upper deck. The test weights should be on board and in place prior to the scheduled time of the inclining test.

#### **4. Pendulums**

1. The pendulum should be long enough to give a measured deflection, to each side of upright, of at least 5 centimeters. Generally, this will require a pendulum length of at least 3 meters. It is recommended that pendulum lengths of 4-6 meters be used. Usually, the longer the pendulum the greater the accuracy of the test; however, if excessively long pendulums are used on a tender vessel the pendulums may not settle down and the accuracy of the pendulums would then be questionable. On large vessels with high GM, pendulums lengths in excess of the length recommended above may be required to obtain the minimum deflection. In such cases should be filled with high viscosity oil. If the pendulums are of different lengths, possibility of collusion between station recorders is avoided.
2. On smaller vessels, where there is insufficient headroom to hang long pendulums, the 5 centimeter deflection should be obtained by increasing the test weight so as to increase the heel. On most vessels the typical inclination is between one and four degrees.
3. The pendulum wire should be piano wire or other monofilament material. The top connection of the pendulum should afford unrestricted rotation of the pivot point. An example is that of a washer with the pendulum wire attached suspended from a nail.
4. A bough filled with a liquid should be provided to dampen oscillations of the pendulum after each weight movement. It should be deep enough to prevent the pendulum weight from touching the bottom. The use of a winged plumb bob at the end of the pendulum wire can also help to dampen the pendulum oscillations in the liquid.

5. The battens should be smooth, light-colored wood, 1 to 2 centimeters thick, and should be securely, fixed in position so that an inadvertent contact will not cause them to shift. The batten should be aligned close to the pendulum wire but not in contact with it.
6. The pendulums may be placed in any location on the vessel, longitudinally and transversely. The pendulums should be in place prior to the scheduled time of the inclining test.
7. It is recommended that inclinometers or other measuring devices only be used in conjunction with at least one pendulum. The Administration may approve an alternative arrangement when this is found impractical.

## **Rule 2**

### **EQUIPMENT REQUIRED**

Besides the physical equipment necessary such as the inclining weights, pendulums, small boat, etc., the following are necessary and should be provided by or made available to the person in charge of the inclining:-

1. Engineering scales for measuring pendulum deflections (rules should be subdivided sufficiently to achieve the desired accuracy);
2. Sharp pencils for marking pendulum deflections;
3. Chalk for marking the various positions of the inclining weights;
4. A sufficiently long measuring tape for measuring the movement of the weight and locating different items onboard;
5. A sufficiently long sounding tape for sounding tanks and taking free board readings;
6. One or more well maintained specific gravity hydrometers with range sufficient to cover 0.999 to 1.030, to measure the specific gravity of the water in which the vessel is floating (a hydrometer for measuring specific gravity of less than 1.000 may be needed in some locations);
7. Other hydrometers as necessary to measure the specific gravity of any liquid on board;
8. Graph paper to plot inclining movements versus tangents;
9. A straight edge to draw the measured waterline on the lines drawing;
10. A pad of paper to record data;

11. An explosion proof testing device to check for sufficient oxygen and absence of lethal gases in tanks and other closed spaces such as voids and coffer dams;
12. A thermometer; and
13. Draught tubes (if necessary).

### **Rule 3**

#### **TEST PROCEDURE**

1. The inclining experiment, the free board / draught readings and the survey may be conducted in any order and still achieve the same results. If the person conducting the inclining test is confident that the survey will show that the vessel is in an acceptable condition and there is the possibility of the weather becoming unfavorable, then it is suggested that the inclining be performed first and the survey last. If the person conducting the test is doubtful that the vessel is complete enough for the test, it is recommended that the survey be performed first since this could invalidate the entire test, regardless of the weather conditions. It is very important that all weights, the number of people on board, etc., remain constant throughout the test.

2. **Initial walk through and survey**

The person responsible for conducting the inclining test should arrive on board the vessel well in advance of the scheduled time of the test to ensure that the vessel is properly prepared for the test. If the vessel to be inclined is large, a preliminary walk through may need to be done the day preceding the actual incline. To ensure the safety of personnel conducting the walk through, and to improve the documentation of surveyed weights and deficiencies, at least two persons, should make the initial walk through. Things to check include: all compartments are open, dean, and dry, tanks are well ventilated and gas free, movable or suspended items are secured and their position documented, pendulums are in place, weights are on board and in place, a crane or other method for moving weights is available, and the necessary plans and equipment are available. Before beginning the inclining test, the person conducting the test should:-

1. Consider the weather conditions. The combined adverse effect of wind and current may result in difficulties or even an invalid test due to the following:-
  1. Inability to accurately record free boards and draughts.

2. Excessive or irregular oscillations of the pendulums.

3. Variation in unavoidable superimposed heeling moments.

In some instances, unless conditions can be sufficiently improved by moving the vessel to a better location, it may be necessary to delay or postpone the test. Any significant quantities of rain water should be removed from the vessel before the test.

2. Make a quick overall survey of the vessel to make sure the vessel is complete enough to conduct the test and to ensure that all equipment is in place. An estimate of items which will be outstanding at the time of the inclining test should be included as part of any test procedure submitted to the Administration. This is required so that the Administration representative can be advised the shipyard / naval architect if in their opinion the vessel will not be sufficiently complete to conduct the incline and that it should be rescheduled. If the condition of the vessel is not accurately depicted in the test procedure and at the time of the inclining test the Administration representative considers that the vessel is in such condition that an accurate incline cannot be conducted, the representative may refuse to accept the incline and require that the incline be conducted at a later date;
3. Enter all empty tanks after it is determined that they are well ventilated and gas free to ensure that they are dry and free of debris. Ensure that any pressed up tanks are indeed full and free of air pockets. The anticipated liquid loading for the incline should be included in the procedure required to be submitted to the Administration;
4. Survey the entire vessel to identify all items which need to be added to the vessel, removed from the vessel, or relocated on the vessel to bring the vessel to the lightship condition. Each item should be clearly identified by weight and vertical and longitudinal location. If necessary, the transverse location should also be recorded. The inclining weights, the pendulums, any temporary equipment, dunnage and the people on board during the inclining test are all among the weights to be removed to obtain the lightship condition. The person calculating the lightship characteristics from the data gathered during the incline and survey and / or the person reviewing the inclining test may not have been present during the test and should be able to determine the exact location of the items from the data recorded and the vessel's drawings. Any tanks containing liquids should be accurately sounded and the soundings recorded;
  - 4.1 It is recognized that the weight of some items on board, or that are to be added, may have to be estimated. If this is necessary, it is in the best interest of safety to be

on the safe side when estimating, so the following rules of thumbs should be followed:-

- i. When estimating weights to be added:-
  - Estimate high for items to be added high in the vessel.
  - Estimate low for items to be added low on the vessel.
- ii. When estimating weights to be removed:-
  - Estimate low for items to be removed from high in the vessel.
  - Estimate high for items to be removed from low in the vessel.
- iii. When estimating weights to be relocated:-
  - Estimate high for items to be relocated to a higher point in the vessel.
  - Estimate low for items to be relocated to a lower point in the vessel.

### **3. Free board / draught readings**

1. Free board / draught readings should be taken to establish the position of the waterline in order to determine the displacement of the vessel at the time of the inclining test. It is recommended that at least five freeboard readings, approximately equally spaced, be taken on each side of the vessel or that all draught marks (forward, mid-ship, and aft) be read on each side of the vessel. Draught mark readings should be taken to assist in determining the waterline defined by freeboard readings, or to verify the vertical location of draught marks on vessels where their location has not been confirmed. The locations for each freeboard readings should be clearly marked. The longitudinal location along the vessel should be accurately determined and recorded since the (molded) depth at each point will be obtained from the vessel's lines. All freeboard measurements should include a reference note clarifying the inclusion of the coating in the measurement and the coaming height.
2. Draught and freeboard readings should be read immediately before or immediately after the inclining test. Weights should be on board and in place and all personnel who will be on board during the test including those who will be stationed to read the pendulums, should be on board and in location during these readings. This is particularly important on small vessels. If readings are made after the test, the vessel should be maintained in the same condition as during the test. For small vessels, it may be necessary to counterbalance the list and trim effects of the freeboard measuring party. When possible, readings should be taken from a small boat.
3. A small boat should be available to aid in the taking of freeboard and draught mark readings. It should have low freeboard to permit accurate observation of the readings.

4. The specific gravity of the floating water should be determined at this time. Samples should be taken from a sufficient depth of the water to ensure a true representation of the floating water and not merely surface water, which would contain fresh water from runoff of rain. A hydrometer should be placed in a water sample and the specific gravity read and recorded.
5. A draught mark reading may be substituted for a given freeboard reading at that longitudinal location if the height and location of the mark has been verified to be accurate by a keel survey while the was in dry dock.
6. The dimensions given on a vessel's lines drawing are normally molded dimensions. In the case of depth, the means the distance from the inside of the bottom shell to the inside of the deck plate. In order to plot the vessel's waterline on the lines drawing, the freeboard readings should be converted to molded draughts. Similarly, the draught mark readings should be corrected from extreme (bottom of keel) to molded (top of keel) before plotting. Any discrepancy between the free board / draught readings should be resolved.
7. The mean draught (average of port and starboard reading) should be calculated for each of the locations where freeboard / draught readings are taken and plotted the vessel's lines drawing or Outboard profile to ensure that all readings are consistent and together define the correct waterline. The resulting plot should yield either a straight line or a waterline which is either hogged or sagged. If inconsistent readings are obtained, the freeboard / draughts should be retaken.

#### **4. The incline**

1. Prior to any weight movements the following should be checked:-
  1. The mooring arrangement should be checked to ensure that the vessel is floating freely. (This should be done just prior to each reading of the pendulums).
  2. The pendulums should be measured and their lengths recorded. The pendulums should be aligned so that when the vessel heels, the wire will be close enough to the batten to ensure an accurate reading but will not come into contact with the batten.
  3. The initial position of the weights is marked on the deck. This can be done by tracing the outline of the weights on the deck.
  4. The communications arrangement is adequate.
  5. All personnel are in place.
2. A plot should be run during the test to ensure that acceptable data is being obtained. Typically, the abscissa of the plot will be heeling moment (weight times distance) and

the ordinate will be the tangent of the heel angle (deflection of the pendulum divided by the length of the pendulum). This plotted line does not necessarily pass through the origin of any other particular point for no single point is more significant than any other point. A linear regression analysis is often used to fit the straight line. The weight movements give a good spread of points on the test plot.

3. Plotting all of the readings for each of the pendulums during the inclining experiment aids in the discovery of bad readings. Since  $(W)(x)/\tan q$  should be constant, the plotted line should be straight. Deviations from a straight line are an indication that there were other moments acting on the vessel during the inclining. These other moments should be identified, the cause corrected, and the weight movements repeated until a straight line is achieved. – Figures A – D illustrate examples of how to detect some of these other moments during the inclining, and a recommended solution for each case. For simplicity, only the average of the readings is shown on the inclining plots.
4. Once everything and everyone is in place, the zero position should be obtained and the remainder of the experiment conducted as quickly as possible, while maintaining accuracy and proper procedures, in order to minimize the possibility of a change in environmental conditions during the test.
5. Prior to each pendulum reading, each pendulum station should report to the control station when the pendulum has stopped swinging. Then, the control station will give a "standby" warning and then a "mark" command. When "mark" is given, the batten at each position should be marked at the location of the pendulum wire. If the wire was oscillating slightly, the center of the oscillations should be taken as the mark. If any of the pendulum readers does not think the reading was good one, the reader should advise the control station and the point should be retaken for all pendulum stations. Likewise, if the control station suspects the accuracy of a reading, it should be repeated for all the pendulum stations. Next to the mark on the batten should be written the number of weight movement, such as zero for the initial-position and one through seven for the weight movements.
6. Each weight movement should be made in the same direction, normally transversely, so as not to change the trim of the vessel. After each weight movement, the distance the weight was moved (center W center) should be measured and the heeling moment calculated by multiplying the distance by the amount of weight, moved. The tangent is calculated for each pendulum by dividing the deflection by the length of the



pendulum. The resultant tangents are plotted on the graph. Provided there is good agreement among the pendulums with regard to the  $\tan \phi$  value, the average of the pendulum readings may be graphed instead of plotting each of the readings.

7. Inclining data sheets should be used so that no data is forgotten and so that the data is clear, concise, and consistent in form and format. Prior to departing the vessel, the person conducting the test and the Administration representative should initial each data sheet as an indicating of their concurrence with the recorded data.

**End of Chapter**

# **PART C**

## **MAIN AND**

## **AUXILLIARY**

## **MACHINERY**

## **REQUIREMENTS**

**Main and Auxiliary Machinery requirements and any other related rules for vessels operating in Inland Waters to be applicable as per IRS and / or any IACS Classification Society Rules and / or IWAI model rules as applicable may be accepted for Inland Vessels**

## Chapter 1

### General Requirements for the Design and Construction of Machinery

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| 1               | <i>General</i>  |
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| 3               | <i>Trials</i>   |
| 4               | <i>Certification of Machinery and Components based upon Quality Management System</i> |

## Section 1

### General

#### 1.1 Scope

The requirement of this Chapter and those given in Ch. 2 to 10 apply to the construction and installation of main propulsion and auxiliary machinery systems, together with their associated equipment, boilers, pressure vessels and pumping and piping arrangements fitted in vessels intended to be classed with IRS.

#### 1.2 Machinery to be constructed under survey

- 1.2.1 In vessels intended to be built under Special Survey, all important units of equipment are to be surveyed at the manufacturer's works. The workmanship is to be to the Surveyor's satisfaction and the Surveyor is to be satisfied that the components are suitable for the intended purpose and duty. Examples of such units are:-

Main propulsion engines, including their associated gearing, flexible couplings, scavenge blowers and superchargers;

Boilers supplying system for propulsion or for services essential for the safety or the operation of the vessel in the waterway including super heaters, economizers, de-super heaters, steam receivers. All other boilers having working pressures exceeding 3.5 bar, and having heating surfaces greater than 4.65 (m<sup>2</sup>);

- Auxiliary engines of 110 (kW) (150 shp) and over which are the source of power for services essential for safety or for the operation of the vessel.
- Steering machinery;
- Athwart ship thrust, units, their prime movers and control mechanisms;
- All pumps necessary for the safety of vessel, e.g. bilge, ballast, fire pumps, etc.;

- Air compressors, air receivers and other pressure vessels necessary for the operation of main propulsion and essential machinery.
- Alarm and control equipment as detailed in Ch. 7; and
- Electrical equipment and electrical propelling machinery as detailed in Ch. 8.

### **1.3 Extent of Survey**

- 1.3.1 The Surveyors are to examine and test the materials and workmanship from the commencement of work until the final test of the machinery under full power working conditions. Any defects, etc., are to be indicated as early as possible. On completion, the Surveyors will submit a report and, if this is found to be satisfactory by IRS, a certificate of class will be granted and an appropriate notation assigned in accordance with Pt. 1

### **1.4 Departures from the rule**

- 1.4.1 Where it is proposed to depart from the requirements of the Rules. Classification society will be prepared to give due consideration to the circumstances of any special case.

### **1.5 Plans and particulars**

- 1.5.1 Before the work is commenced, plans in triplicate of all machinery items, as detailed in the Ch. 2 to 9 giving the requirements for individual systems, are to be submitted for approval. The particulars of the machinery, including power ratings and design calculations, where applicable necessary to verify the design, are also to be submitted. Any subsequent, modifications are subject to approval before being put in to operations.
- 1.5.2 The strength requirements for rotating parts of the machinery, as specified in Ch. 4 to 8, are based upon strength consideration only and their application does not relieve the manufacturer from the responsibility for the presence of dangerous vibrations in the installation at speeds within the operating range.

### **1.6 Availability of machinery for operation**

- 1.6.1 The design and arrangement it to be such that the machinery can be started and controlled on board vessel without external aid, so that operating conditions can be maintained under all circumstances.

### **1.7 Ambient reference conditions**

- 1.7.1 The rating of the main and auxiliary machinery is to be suitable for the temperature conditions associated with the geographical limits of the restricted device.

1.7.2 Machinery installations are to be designed such as to ensure proper operations under the conditions as under:-

- Permanent list of 10°
- Permanent trim of 5°

### **1.8 Power ratings**

1.8.1 In the following Chapters, where the dimensions of any particular component are determined from shaft power, P in (kW) (H, in shp). and revolutions per minute, R. the values to be used are to be derived from the following:-

- For main propelling machinery, the maximum shaft power and corresponding revolutions per minute giving the maximum torque for which the machinery is to be classed; and
- For auxiliary machinery, the maximum continuous shaft power and corresponding revolutions per minute which will be used in service.

### **1.9 Units**

1.9.1 Units and formulae included in the Rules are shown in SI units followed by metric units in brackets where appropriate.

1.9.2 Where the metric version of shaft power, i. e. (shp), appears in the Rules, 1 shp is equivalent to 75 (kgf meter/sec) or 0.735 (kW).

1.9.3 Pressure gauges may be calibrated in bar. Where  
 $1 \text{ bar} = 0.1 \text{ (N/mm}^2\text{)} = 1.02 \text{ (kgf/cm}^2\text{)}$

### **1.10 Power conditions for generator sets**

1.10.1 Auxiliary engines coupled to electrical generators are to be capable under service conditions of developing continuously the power to drive the generators at full rated output and, if developing for a short period (15 minutes) an overload power of not less than 10 percent.

1.10.2 Engine builders are to satisfy the Surveyors by tests on individual engines that the above requirements, as applicable, can be complied with, due account being taken of the difference between the temperature under test conditions and those specified in 1.7.1. Alternatively, where it is not practicable to test the engine / generator set as unit, type tests (e.g. against a brake) representing a particular size and range of engines may be accepted. With oil engines any fuel stop fitted is to be set to permit the short period overload power of not less than 10 percent above full, rated output being developed.

**1.11 Fuel**

1.11.1 The flash point (closed cup test) of oil fuel is to be not less than 55° C, unless specially approved.

1.11.2 Fuels with flash points lower than 55°C, but not less than 43°C, unless specially approved, may be used in vessels, intended for service restricted to certain geographical limits, where it can be ensured that the temperature of the machinery spaces will always be 10°C below the flash point of the fuel. In such cases, safety precautions and the arrangements for storage and pumping will be specially considered.

**1.12 Astern power**

1.12.1 Sufficient astern power is to be provided to maintain control of the vessel in all normal circumstances.

**Section 2****Machinery Room Arrangements****2.1 General**

2.1.1. The machinery is to be so designed installed and protected that risks of fire, explosions, accidental pollution, leakages and accidents thereof, and accidents to personnel working in machinery spaces will be minimized.

2.1.2 The design and arrangement of machinery foundations, shaft connections, piping and ducting is to take into account the effects of thermal expansion, vibrations, misalignment and hull interaction to ensure operation within safe limits. Bolts and nuts exposed to dynamic forces and vibrations are to be properly secured.

**2.2 Accessibility**

2.2.1 Accessibility for attendance and maintenance purposes, it to be provided for machinery plants.

**2.3 Fire protection**

2.3.1 All surfaces of machinery where the surface temperature may exceed 220° C and where impingement of flammable liquids may occur are to be effectively shielded to prevent ignition. Where insulation covering these surfaces is oil absorbing or may permit penetration of oil, the insulation is to be encased in steel or equivalent.

- 2.3.2 Flammable or oil absorbing materials are not to be used in floors, gratings, etc. in boiler and engine rooms, shaft tunnels or in compartments where settling tanks are installed.

## **2.4 Ventilation**

- 2.4.1 All spaces, including engine and cargo pump spaces, where flammable or toxic gases or vapors may accumulate, are to be provided with adequate ventilation under all conditions.

## **2.5 Communications**

- 2.5.1 At least one independent means of communication is to be provided between the bridge and engine room control station.

# **Section 3**

## **Trials**

### **3.1 General**

- 3.1.1 Tests of components and trials of machinery, as detailed in the Chapters giving the requirements for individual systems are to be carried out to the satisfaction of the Surveyors.

### **3.2 Trials**

- 3.2.1 For all types of installations, the trials are to be of sufficient duration, and carried out under normal maneuvering conditions, to prove the, machinery under power. The trials are also to demonstrate that any vibration which may occur within the operating speed range is acceptable.
- 3.2.2 The trials are to include demonstrations of the following:-
- The adequacy of the starting arrangements to provide the required number of starts of the main engines.
  - The ability of the machinery to reverse the direction of thrust of the propeller in sufficient time, under normal maneuvering conditions, and so bring the-vessel to rest from maximum ahead rated speeds.
- 3.2.3 Where controllable pitch propellers are fitted, the free route astern trial is to be carried out with the propeller blades set in full pitch astern position. Where emergency manual pitch setting facilities are provided, their operation is to be demonstrated to the satisfaction of the Surveyors.
- 3.2.4 All trials are to be to Surveyor's satisfaction.

## **Section 4**

### **Certification of Machinery and Components based upon Quality Management Systems**

#### **4.1 General**

- 4.1.1 This certification scheme is applicable to works where the employment of quality control procedures is well established. Classification society will have to be satisfied that the practices employed will ensure that the quality of finished products is to the standards which would be demanded when using traditional survey procedures.
- 4.1.2 Classification society will consider proposed designs for compliance with the Rules, or other appropriate requirements, and the extent to which the manufacturing processes, and control procedures ensure conformity of the product to the design. A comprehensive survey will be made by the Surveyors of the actual operation of the quality control programme and of the adequate and competence of the staff to implement.
- 4.1.3 Where classification society considers that the requirements of 4.1.2 can be satisfactorily compiled with, the manufacturers will, in general, be approved and authorized to inspect and certify their products.
- 4.1.4 The procedures and practices of manufacture which have been granted approval will be kept under continuous review.
- 4.1.5 Approval by another organization will not normally be acceptable as sufficient evidence that a manufacturer's arrangements comply with class requirements.

#### **4.2 Requirements for approval**

- 4.2.1 The manufacturer is required to have adequate equipment and facilities for those operations appropriate to the level of design, development and manufacture being undertaken.
- 4.2.2 The manufacturer shall demonstrate that the firm has experience consistent with technology and complexity of the product for which approval is sought and that firm's products have been of a consistently high standard.
- 4.2.3 The manufacturer should have implemented quality management systems generally in accordance with the ISO 9000 series of standards.
- 4.2.4 The manufacturer shall establish and maintain procedures and controls to ensure that class requirements for certification of materials and components at sub-contractor's works are complied with.



**4.3 Information required for approval**

4.3.1 Manufacturers applying for approval under this scheme are to submit the following information:-

- Description of the products for which certification is required including, where applicable, model or type number;
- Applicable plans and details of materials used;
- An outline description of all important manufacturing plant and equipment;
- A summary of equipment used for measuring and testing during manufacturing and completion;
- The quality manual;
- The system used for identification and traceability;
- Number and qualification of personnel engaged in quality control and quality assurance and
- A list of suppliers of materials and components and proposed arrangements to ensure compliance with the requirements for certification.

**4.4 Approval and maintenance of approval**

4.4.1 After receipt and appraisal of the information required by 4.3, an assessment of the works would be carried out by the Surveyors to ensure compliance with the quality manual.

4.4.2 If the Initial assessment of works confirms that the implementation of the quality management systems is satisfactory, department will issue to the manufacturer a Quality Assurance Approval Certificate which will include details of the products for which approval, has been given.

4.4.3 An extension of approval in respect of product type may be given at the discretion of chief surveyor without any additional assessment.

4.4.4 The certificate will be valid for 3 years subject to surveillance assessment being carried out every 6 months.

4.4.5 When significant faults or deficiencies are found during surveillance assessments or surveillance assessments are not carried out, the certificate of approval may be withdrawn / suspended at the discretion of the chief surveyor.

**End of Chapter**

**Chapter 2**  
**Piping Design Requirements**  
**Contents**

Section

- 1 General
- 2 Carbon and Low Alloy Steel Pipes and Fittings
- 3 Copper and Copper Alloy Pipes and Fittings
- 4 Cast Iron Pipes and Fittings
- 5 Plastic pipes
- 6 Flexible Hoses
- 7 Hydraulic Tests on Pipes and Fittings

**Section 1**  
**General**

**1.1 Scope**

- 1.1.1 The requirements of this Chapter apply to the design and construction of piping systems, including pipe fittings forming parts of such systems but excluding steam piping systems and systems where the temperature exceeds 300° C.
- 1.1.2 For steam piping systems and systems having temperatures greater than 300° C, the rules and rules for Construction & Classification of Steel Vessels will be applicable.

**1.2 Classes of pipes**

- 1.2.1 For the purpose of testing, type of joints to be adopted heat treatment and welding procedure, piping systems are divided into three classes, as given in Table 1.2.1.
- 1.2.2 For Class I piping, the *Rules and Rules for the Construction & Classification of Steel Vessels* will be applicable,
- 1.2.3 In addition to the pressure piping systems in Table 1.2.1. Class III pipes may be used for open ended piping, e.g. overflows, vents, boiler waste steam pipes, open ended drains etc.

**1.3 Design pressure**

- 1.3.1 The design pressure, P, is the minimum permissible working pressure and is to be not less than the highest set pressure of the safety valve or relief valve.

- 1.3.2 The design pressure of feed piping and other piping on the discharge from pumps is to be taken as the pump pressure at full rated speed against a shut valve. Where a safety valve or other protective device is fitted to restrict the pressure to a lower value than the shut valve load, the design pressure is to be the highest set pressure of the protective design.

**Table 1.2.1 : Classes of piping systems**

| <b>Piping system</b> | <b>Class I</b>        | <b>Class II</b>        | <b>Class III</b>       |
|----------------------|-----------------------|------------------------|------------------------|
| Fuel oil             | $P > 16$ or $T > 150$ | $P < 16$ and $T < 150$ | $P < 7$ and $T < 60$   |
| Other media          | $P > 49$ or $T > 300$ | $P < 40$ and $T < 300$ | $P < 16$ and $T < 200$ |

#### **1.4 Design temperature**

- 1.4.1 The design temperature is to be taken as the maximum temperature of the internal fluid, but no case is it to be less than 50° C.

#### **1.5 Design symbols**

- 1.5.1 The symbols used in this Chapter are defined as follows: a = Percentage negative manufacturing tolerance on thickness; b = Bending allowance (mm);  
c = corrosion allowance (mm);  
D = outside diameter of pipe (mm) (see 1.5.2);  
d = inside diameter of pipe (mm) (see 1.5.3);  
e = weld efficiency factor (see 1.5.4);  
P = design pressure, in (N/mm<sup>2</sup>);  
P<sub>t</sub> = hydraulic test pressure, in (N/mm<sup>2</sup>);  
R = radius of curvature of a pipe bend at the center line of the pipe (mm);  
T = design temperature, in C°;  
t = the minimum thickness of a straight pipe (mm) including corrosion allowance and negative tolerance, where applicable;  
t<sub>b</sub> = the minimum thickness of a straight pipe to be used for a pipe bend (mm) including bending allowance, corrosion allowance and negative tolerance, where applicable;  
σ = maximum permissible design stress, in (N/mm<sup>2</sup>).

- 1.5.2 The outside diameter, D is subject to manufacturing tolerance, but these are not to be used in the evaluation of formulae.
- 1.5.3 The inside diameter d, is not to be confused with normal size, which is an accepted designation associated with outside diameters of a standard rolling sizes.
- 1.5.4 The weld efficiency factor e, is to be taken as 1.0 for seamless and electric resistance and induction welded steel pipes. Where other methods of pipe manufacture are proposed, the value of e will be specially considered.

## 1.6 Heat treatment

- 1.6.1 Method of heat treatment and means of temperature control and recording are to be to the satisfaction of Surveyors.

## Section 2

### Carbon and Low Alloy Steel Pipes and Fittings

## 2.1 Materials

- 2.1.1 Materials for Class I and Class II piping systems, also for vessel-side valves and fittings and valves on the collision bulkhead, are to be manufactured and tested in accordance with the appropriate requirements of Ch. 8. Pt 2. *Inspection and Testing of Materials of Rules & Rules for the Construction and Classification of Steel Vessels.*
- 2.1.2 Materials for Class III piping systems may be manufactured and tested in accordance with the requirements of acceptable national international specifications. Pipes having forge welded longitudinal seams are not to be used for oil fuel systems, for heating coils in oil tanks, or for pressure exceeding 0.4 (N/mm<sup>2</sup>). The manufacturer's test certificate will be acceptable and is to be provided for each consignment of materials.

## 2.2 Minimum thickness of steel pipes and bends

- 2.2.1 The maximum permissible design stress,  $\sigma$  is to be taken as the lowest of the following values:-

$$\sigma \frac{Et}{1.6} \text{ or } \frac{R_{20}}{2.7} \text{ or } \sigma = \frac{S_R}{1.6}$$

Where

Et = specified minimum lower yield or 0.2 percent proof stress at the design temperature.

R<sub>20</sub> = specified minimum tensile strength at ambient temperature.

S<sub>R</sub> = average stress to produce rupture in 100.000 hours at the design temperature.

| <b>2.2.1 : Carbon and carbon-manganese steel pipes : Maximum permissible stress (N/mm<sup>2</sup>)</b> |  |     |     |     |     |
|--|--|-----|-----|-----|-----|
| <b>Design temp. °C</b>   | <b>Specified minimum tensile strength (N/mm<sup>2</sup>)</b> |     |     |     |     |
|  | 320  | 360 | 410 | 460 | 490 |
| 50   | 107  | 120 | 136 | 151 | 160 |
| 100  | 105  | 117 | 131 | 146 | 156 |
| 150  | 99   | 110 | 124 | 139 | 148 |
| 200  | 92   | 103 | 117 | 132 | 141 |
| 250  | 78   | 91  | 106 | 122 | 131 |
| 300  | 62   | 76  | 93  | 111 | 121 |

2.2.2 The maximum thickness,  $t$ , of straight steel pipes is to be determined by following formula:-

$$t = \left( \frac{PD}{2\sigma e + P} + C \right) \frac{100}{100 - \alpha} (mm)$$

where,

$P$ ,  $D$ ,  $e$  and are defined in Sec. 1, Cl. 1.5.1

$\sigma$  is defined in 2.2.1 and also obtained from Tables 2.2.1

$c$  is obtained from Table 2.2.2.

| <b>Table 2.2.2 : Values of <math>c</math> for steel pipes</b>  |                              |
|--|------------------------------|
| <b>Piping service</b>  | <b>C (mm)<br/>(See Note)</b> |
| Compressed air systems   | 1.0                          |
| Hydraulic / Lubricating oil systems  | 0.3                          |
| Fuel oil systems   | 1.0                          |
| Cargo oil systems  | 2.0                          |
| Refrigerating plants   | 0.3                          |
| Fresh water systems  | 0.8                          |
| Note:-<br>For pipes passing through tanks an additional corrosion allowance is to be considered according to the figures given in Table and depending upon the external medium in order to account for the external corrosion. |                              |

- 2.2.3 The minimum thickness,  $t_o$ , of a straight steel pipe to be used for a pipe bend is to be determined by the following formula, except where it can be demonstrated that the use of a thickness less than  $t_b$  would not reduce the thickness below 't' at any point after bending:-

$$t_b = \left( \frac{PD}{200\sigma e + P} + b + c \right) \frac{100}{100 - \alpha} \text{ (mm)}$$

where,

P, D, R, e, b and a are defined in Sec. 1, Ch. 1.5.1;

$\sigma$  and c are defined in table 2.2.1 and 2.2.2 respectively;

$$b = \frac{D}{2.5R} \left( \frac{PD}{2\sigma e + P} \right) \text{ (mm)}$$

In general R not to be less than 3D

- 2.2.4 The minimum thickness calculated in accordance with 2.2.2 and 2.2.3 is not to be less than that given in Table 2.2.4. Where the pipes are efficiently protected against corrosion, the thickness may be reduced by not more than 1.0 (mm). For threaded pipes, where permitted, the thickness is to be measured at the bottom of the threads.

**Table 2.2.4 : Minimum pipe thickness, t (mm) (see note)**

| External diameter D (mm) | Pipes in general | Venting overflow & sounding pipes for structural tanks |
|--------------------------|------------------|--|
| 10.2-12                  | 1.6              | -  |
| 13.5-19.3                | 1.8              | -  |
| 20                       | 2                |  |
| 21.3 - 25                | 2                | -  |
| 26.9 – 33.7              | 2                | -  |
| 38 – 44.5                | 2                | 4.5  |
| 48.3                     | 2.3              | 4.5  |
| 51 – 63.                 | 2.3              | 4.5  |
| 70                       | 2.6              | 4.5  |
| 76.1 – 82.5              | 2.6              | 4.5  |
| 88.9 – 108               | 2.9              | 4.5  |
| 114.3 – 125              | 3.2              | 4.5  |
| 133 – 139.7              | 3.6              | 4.5  |

|               |     |     |
|---------------|-----|-----|
| 152.4 – 168.3 | 4   | 4.5 |
| 177.8         | 4.5 | 5   |
| 193.7         | 4.5 | 5.4 |
| 219.1         | 4.5 | 5.9 |
| 244.5 – 273   | 5   | 6.3 |
| 298.5 – 368   | 5.6 | 6.3 |
| 406.4 – 457.2 | 6.3 | 6.3 |

### **2.3 Flange connections**

2.3.1 Flanges with their pressure-temperature ratings in accordance with recognized national / international standards will normally be accepted.

2.3.2 Flanges may be cut from plates or may be forged or cast. The material is to be suitable for the design temperature. Flanges may be attached to the branches by screwing and expanding or by welding. Alternative methods of flange attachment may be accepted provided details are submitted for consideration.

2.3.3 Examples of accepted flange connections and their uses are given in Fig. 2.3.1 and Table 2.3.1 respectively.

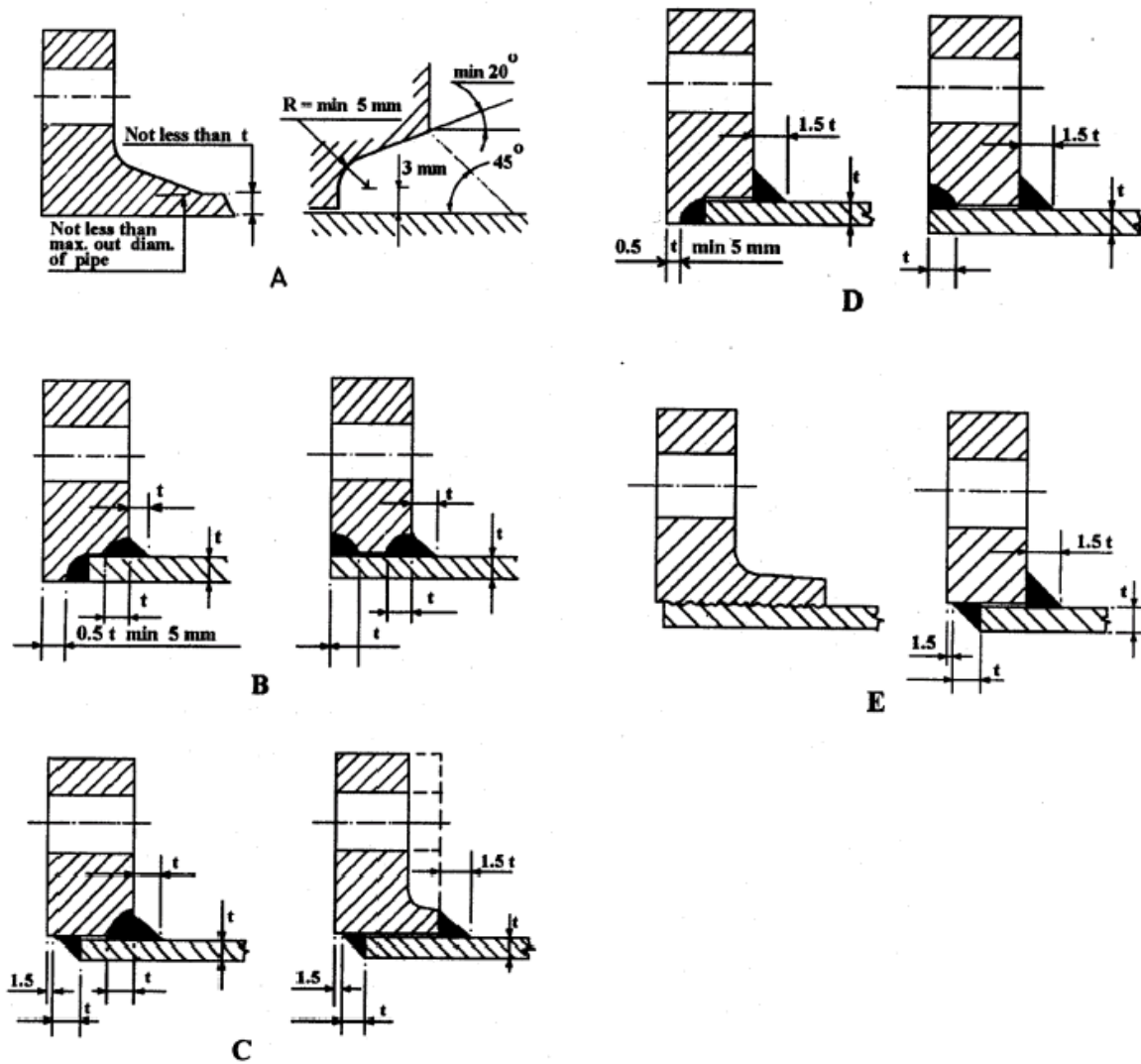


Fig. 2.3.1

Figure

| Table 2.3.1 : Type of flange connections |                            |                      |                            |
|--|----------------------------|----------------------|----------------------------|
| Class of piping                          | Lub. and fuel oil          | Other media          |                            |
|  | Typical flange application | $t^{\circ} \text{C}$ | Typical flange application |
| II                                       | A-B-C                      | $> 250 \leq 250$     | ABC<br>A-B-C-D-E           |
| III                                      | A-B-C-E                    |                      | A-B-C-D-E                  |



2.3.4 Where flanges are secured by screwing, as indicated in Fig. 2.3.1 the pipes and flange are to be screwed with a vanishing thread and the diameter of the screwed position of pipe over the thread is not to be appreciably less than the outside diameters of the unscrewed pipe. After the flange has been screwed hard home, the pipe is to be expanded into the flange. The vanishing thread on a pipe is to be not less than three pitches in length, and the diameter at the root of the thread is to increase uniformly from the standard rood diameter to the diameter at the top of the thread. This may be produced by suitably grinding the dies, and the flange should be tapered out to the same formation.

## 2.4 Threaded sleeve joins

2.4.1 Threaded sleeve joints, in accordance with national or other established standards, may be used with carbon steel pipes within the limits given in Table 2.4.1 and for services other than pipe systems conveying combustible fluids.

| <b>Table 2.4.1 : Limiting design conditions for threaded sleeve joints</b> |  |                               |
|--|--|-------------------------------|
| <b>Normal bore (mm)</b>  | <b>Maximum pressure<br/>(N/mm<sup>2</sup>)</b> | <b>Maximum temperature °C</b> |
| = < 25   | 1.2  | 260                           |
| > 25 =< 40   | 1.0  | 260                           |
| > 40 =< 80   | 0.85   | 260                           |
| > 80 =< 100  | 0.7  | 260                           |

## 2.5 Non-destructive examination of welded pipes

2.5.1 In addition to visual examination of pipe welds by the Surveyors, non-destructive examination of butt and fillet welds is to be carried out in accordance with 2.5.2 to 2.5.4 to the satisfaction of the Surveyors.

2.5.2 Selected butt welds of pipes of outside diameter of 101.6 (mm) and over in Class I piping systems are to be radio graphed at Surveyor's discretion. Use of ultrasonic examination in lieu of radiography will be specially considered.

2.5.3 Selected fillet welds in pipes of 101.6 (mm) outside diameter and over in Class II piping systems are to be examined by magnetic particle or liquid penetrate flaw testing at Surveyor's discretion.

2.5.4 Defects in welds are to be rectified and re-examined by the appropriate test method, all to the satisfaction of the Surveyors.

**2.6 Post-weld heat treatment**

- 2.6.1 Carbon and carbon-manganese steel pipes and fabricated branch pipes, manufactured from material having a carbon content not exceeding 0.25 percent and having a thickness exceeding 30 (mm), are to be given a stress relieving heat treatment on completion of welding. All pipes and branches having carbon content in excess of 0.25 percent are to be given a stress relieving heat treatment. Where oxy-acetylene welding has been employed, however, all the pipes and branch pieces are to be normalized on completion of welding.

**Section 3****Copper and Copper Alloys Pipes and Fittings****3.1 Materials**

- 3.1.1 Materials for Class II piping systems and shipside valves and fittings and valves on the collision bulkhead are to be manufactured and tested in accordance with the requirements of Ch. 8. Pt. 2, Inspection and Testing of Materials of Rules & Rules for the Construction and Classification of Steel Vessels.
- 3.1.2 Materials for Class III piping systems are to be manufactured and tested in accordance with the requirements of acceptable national / international specifications. The manufacturer's test certificate will be acceptable and is to be provided for each consignment of material.
- 3.1.3 Pipes are to be seamless and branches are to be provided by cast or stamped fittings, pipe pressings or other approved fabrications.
- 3.1.4 Brazing and welding materials are to be suitable for the operating temperature and for the medium being carried. All brazing and welding are to be carried out to the satisfaction of the Surveyors.
- 3.1.5 In general, the maximum permissible service temperature of copper and copper alloy pipes, valves and fittings is not to exceed 200°C for copper and aluminum brass, and 300°C for copper nickel. Cast bronze valves and fittings complying with the requirements of Ch.8, Pt. 2, Inspection and Testing of Materials, of Rules & Rules for the Construction and Classification of Steel Vessels may be accepted up to 260° C.

**3.2 Minimum thickness of pipes**

- 3.2.1 The minimum thickness,  $t$ , of straight copper and copper alloy pipes is to be determined by the following formula:-

$$t = \left( \frac{PD}{200\sigma_e + P} + C \right) \frac{100}{100 - \alpha} (mm)$$

Where, P, D and  $\alpha$  are as defined in Sec. 1, Cl. 1.5.1

$\sigma$  = maximum permissible design stress, in (N/mm<sup>2</sup>) from Table 3.2.1; Intermediate values of stresses may be obtained by linear interpolation;

c = corrosion allowance;

= 0.8 (mm) for copper, aluminum brass and copper-nickel alloys where the nickel content is less than 10 percent;

= 0.5 (mm) for copper-nickel alloys where the nickel content is 10 percent or greater.

= 0 where the media are not-corrosive relative to the pipe material.

Table 3.2.1 : Copper and Copper Alloy Pipes

| Pipe material              | Condition of supply | Specified min. tensile strength (N/mm <sup>2</sup> ) | Permissible stress (N/mm <sup>2</sup> ) |      |      |      |      |      |
|----------------------------|---------------------|--|---|------|------|------|------|------|
|                            |                     |  | Maximum design temperature °C           |      |      |      |      |      |
|                            |                     |  | 50                                      | 75   | 100  | 125  | 150  | 175  |
| Copper                     | Annealed            | 220  | 41.2                                    | 41.2 | 40.2 | 40.2 | 34.3 | 27.5 |
| Aluminum brass             | Annealed            | 320  | 78.5                                    | 78.5 | 78.5 | 78.5 | 78.5 | 51.0 |
| 90 / 10 copper nickel iron | Annealed            | 270  | 68.6                                    | 68.6 | 67.7 | 65.7 | 63.7 | 61.8 |
| 70 / 30 copper nickel      | Annealed            | 360  | 81.4                                    | 79.4 | 77.5 | 75.5 | 73.5 | 71.6 |
|                            |                     |  | Maximum design temperature °C           |      |      |      |      |      |
|                            |                     |  | 200                                     | 225  | 250  | 275  | 300  |      |
| Copper                     | Annealed            | 220  | 18.6                                    | -    | -    | -    | -    |      |
| Aluminum brass             | Annealed            | 320  | 24.5                                    | -    | -    | -    | -    |      |
| 90 / 10 copper nickel iron | Annealed            | 270  | 58.8                                    | 55.9 | 52.0 | 48.1 | 44.1 |      |
| 70 / 30 copper nickel      | Annealed            | 360  | 69.6                                    | 67.7 | 65.7 | 63.7 | 61.8 |      |

- 3.2.2 The minimum thickness,  $t_b$ , of a straight seamless copper or copper alloy pipe to be used for a pipe bend is to be determined by the formula below, except where it can be demonstrated that the use of a thickness less than  $t_b$  would not reduce the thickness below 't' at any point after bending:-

$$t_b = \left( \frac{PD}{200\sigma_e + P} + b + c \right) \frac{100}{100 - \alpha} (mm)$$

Where P, D, b and c are defined in sec. 1 Cl. 1.5.1, and e and c are defined in 3.2.1

$$b = \frac{D}{2.5 R} \left( \frac{PD}{2\sigma_e + P} \right) (mm)$$

In general, R is to be not less than 3D.

| <b>Table 3.2.2 : Limiting design conditions for threaded sleeve joints</b> |  |                     |
|--|--|---------------------|
| <b>Standard pipe sizes (outside diameter) (mm)</b>                         | <b>Minimum overriding nominal thickness (mm)</b> |                     |
|  | <b>Copper</b>                                    | <b>Copper alloy</b> |
| 8 to 10  | 1.0  | 0.8                 |
| 12 to 20   | 1.2  | 1.0                 |
| 25 to 44.5   | 1.5  | 1.2                 |
| 50 to 76.1   | 2.0  | 1.5                 |
| 88.9 to 108  | 2.5  | 2.0                 |
| 133 to 159   | 3.0  | 2.5                 |
| 193.7 to 267   | 3.5  | 3.0                 |
| 273 to 457.2   | 4.0  | 3.5                 |
| 508  | 4.5  | 4.0                 |

- 3.2.3 Where the minimum thickness calculated by 3.2.1 or 3.2.2 is less than shown in Table 3.2.2 the minimum nominal thickness for the appropriate standard pipe size shown in the Table is to be used. No allowance is required for negative tolerance or reduction in thickness due to bending on this nominal thickness. For threaded pipes, where permitted, the minimum thickness is to be measured at the bottom of the thread.

### **3.3 Heat treatment**

- 3.3.1 Pipes which have been hardened by cold bending are to be suitably heat treated on completion of fabrication and prior to being tested by hydraulic pressure. Copper pipes are to be annealed and copper alloy pipes are to be either annealed or stress relief heat treated.

## **Section 4**

### **Cast Iron Pipes and Fittings**

#### **4.1 Spheroidal or nodular graphite cast iron**

- 4.1.1 Spheroidal or nodular graphite iron castings for pipes, valves and fittings in Class II and III piping systems are to be made in a grade having a specified minimum elongation not less than 12 percent on gauge length of  $\sqrt{S_o}$ , where  $S_o$  is the actual cross-sectional area of the test piece.
- 4.1.2 Castings for Class II and III systems, also for shipside valves and fittings and valves on collision bulkhead, are to be manufactured and tested in accordance with the requirements of acceptable national specifications. A manufacturer's test certificate will be accepted and is to be provided for each consignment of material.
- 4.1.3 Where the elongation is less than the minimum required by 4.1.1 the material is, in general, to be subject to the same limitations as grey cast iron.

#### **4.2 Grey cast iron**

- 4.2.1 Grey cast iron pipes, valves and fittings will, in general, be accepted in Class III piping systems except as stated in 4.2.2.
- 4.2.2 Grey cast iron is not to be used for following:-
- a) Pipes for steam systems and fire extinguishing systems;
  - b) Pipes, valves and fittings for boiler blow down systems and other piping systems subject to shock or vibration;
  - c) Shipline valves and fittings;
  - d) Valves fitted on collision bulkhead;
  - e) Clean ballast lines through cargo oil tanks to forward ballast tanks;
  - f) Bilge lines in tanks;
  - g) Outlet valves of fuel tanks with static head.
- 4.2.3 Grey iron castings for piping systems are to comply with acceptable national / international specifications.

## **Section 5**

### **Plastic Pipes**

#### **5.1 General**

- 5.1.1 Proposals to use plastics material in shipboard piping systems will be considered in relation to the properties of the materials, the operating conditions of temperature and pressure, and the intended service. Any proposed service for plastic pipes not mentioned in these rules is to be submitted for special consideration.
- 5.1.2 The specification of the plastic material including mechanical and thermal properties and chemical resistance data, is to be submitted for consideration.
- 5.1.3 These requirements are applicable to thermo-plastic pipes but, where appropriate, may also be applied to pipes manufactured in fiber-reinforced thermosetting resins.
- 5.1.4 Plastic pipes are not to be used where they will be subject to temperatures above 60°C or below 0°C. Special consideration will be given to particular material in appropriate applications at higher temperatures.

#### **5.2 Applications**

- 5.2.1 Plastics pipes of approved type may be used for the following services:-
- a) Air and sounding pipes to tanks used exclusively for carrying water ballast or fresh water, with the exception of the portion above deck;
  - b) Sounding pipes to cargo holds;
  - c) Water ballast and fresh water pipes situated inside tanks used exclusively for carrying water ballast or fresh water; and
  - d) Scupper pipes draining inboard provided they are not led within the boundaries of refrigerated chambers. The first two items (a and b) are not applicable to passenger vessels.
- 5.2.2 Plastics pipes may be used for domestic and similar services for which there are no rule requirements, such as the following:-
- a) Domestic cold sea and fresh water systems;
  - b) Sanitary systems;
  - c) Sanitary and domestic waste pipes wholly, situated above the free board deck; and
  - d) Water pipes associated with air conditioning plants.

Notwithstanding the foregoing, plastic pipes are not to be used in sea water systems where leakage or failure of the pipes could give rise to the danger of flooding.

5.2.3 Since plastic materials are generally heat sensitive and very susceptible to fire damage, plastic pipes will not be acceptable for service essential to safety, such as the following:-

- a) Fire extinguishing pipes;
- b) Bilge pipes in cargo holds;
- c) Bilge and ballast pipes in the machinery space;
- d) Main and auxiliary water circulating pipes;
- e) Feed and condensate pipes; and
- f) Pipes carrying – oil or other flammable liquids,

### **5.3 Intactness of bulkhead and decks**

5.3.1 Where plastic pipes are arranged to pass through watertight or fire resisting bulkheads or decks, provision is to be made for maintaining the integrity of the bulkhead or deck in the event of pipe failure. Details of the arrangements are to be submitted for approval.

### **5.4 Design and construction**

5.4.1 Pipes and fittings are to be of robust construction and are to comply with the requirements of such national / international standards as may be consistent with their intended use. Particulars of scantlings and joints are to be submitted for consideration.

5.4.2 All – pipes are to be adequately but freely supported. Suitable provision for expansion and contraction to be made in each range of pipes to allow for large movements between plastic pipe and steel structure, the coefficient of thermal expansion for plastics being eight or more times that of steel.

5.4.3 All fittings and branches are to be suitable for the intended service and are to have joints of cemented, flanged or other approved types.

5.4.4 The strength of the pipes and fittings and the acceptability of any jointing system employed is to be checked tested at the Surveyor's discretion. The strength of pipes, fittings, joints between pipes and joints between pipes and fittings, as appropriate, is to be determined by hydraulic pressure tests to destruction of sample assemblies. The pressure is to be so applied that failure of the test sample assembly occurs in not less than 5 minutes. Deformation of the pipes and fittings during test is acceptable.

## **Section 6**

### **Flexible Hoses**

#### **6.1 General**

- 6.1.1 Short joining lengths of flexible hoses of approved type may be used, where necessary to accommodate relative movement between various items of machinery connected to permanent piping systems.
- 6.1.2 For the purpose of approval for the applications in 6.2, details of the materials and construction of the hoses, and the method of attaching the end fittings, are to be submitted for consideration.
- 6.1.3 In general, the use of hose clips as a means of securing the ends of hoses is to be restricted to the engine cooling water system, where the hose consists of a short straight length joining two metal pipes, between two fixed points on the engine.
- 6.1.4 Prototype pressure tests are to be carried out on each type of hose, complete with end fittings and in no case is the bursting pressure to be less than five times the maximum working pressure in service.
- 6.1.5 Attention is to be given to any statutory requirements of the National Authority of the country in which the vessel is to be registered. Such requirements may include a fire test for hoses that are intended to be used in systems conveying flammable fluids or sea water.

#### **6.2 Applications**

- 6.2.1 Synthetic rubber hoses, with integral cotton or similar braid reinforcement, may be used in fresh and sea water cooling systems. In the case of sea water systems, where failure of the hoses could give rise to the danger of flooding, the hoses are to be suitably enclosed.
- 6.2.2 Synthetic rubber hoses, with single or double-closely woven integral wire braid reinforcement or convoluted metal pipes with wire braid protection, may be used in bilge, ballast, compressed air, fresh water, sea water, fuel oil and lubricating oil systems. Where synthetic rubber hoses are used for fuel oil supplied to burners, the hoses are to have external wire braid protection in addition to the integral wire braid.



## **Section 7**

### **Hydraulic Tests on Pipes and Fittings**

#### **7.1 Hydraulic tests before installation onboard**

- 7.1.1 All Class II pipes and their associated fittings are to be tested by hydraulic pressure to the Surveyor satisfaction. Further, all steam feed, compressed air and fuel oil pipes, together with their fittings, are to be similarly tested where the design pressure is greater than 0.35 (N/mm<sup>2</sup>). The test is to be carried out after completion of manufacture and before installation on board and where applicable before insulating and coating.
- 7.1.2 The test pressure is to be 1.5 time design pressure.
- 7.1.3 All valve bodies are to be tested by hydraulic pressure to 1.5 times the nominal pressure rating at ambient temperature. However the test pressure need not be more than 7 (N/mm<sup>2</sup>) above the design pressure specified for the design temperature.

#### **7.2 Testing after assembly onboard**

- 7.2.1 Heating coils in tanks and fuel oil piping are to be tested by hydraulic pressure, after installation on board, to 1.5 times the design pressure but in no case to less than 0.35 (N/mm<sup>2</sup>).
- 7.2.2 Where bilge pipes are accepted in way of double bottom tanks or deep tanks, the pipes after fitting are to be tested by hydraulic pressure to the same pressure as the tanks through which they pass.

**End of Chapter**

**Chapter 3**  
**Pumping and piping**  
**Contents**

**Section**

- 1 General
- 2 Bilge and Sounding Piping Systems
- 3 Air and Sounding Piping Systems
- 4 Fuel Oil Systems
- 5 Engine Cooling Water Systems
- 6 Lubricating Oil Piping Systems
- 7 Engine Exhaust Gas Piping Systems
- 8 Pumping and Piping Systems for Vessels not fitted with Propelling Machinery

**Section 1**

**General**

**1.1 Scope**

- 1.1.1 The requirements of this chapter are applicable to all vessels except where otherwise stated.
- 1.1.2 Piping systems layouts for which no requirements are given herein. Will be specially considered.

**1.2 Plans**

- 1.2.1 The following plans in diagrammatic form are to be submitted for consideration before proceeding with the work.
  - a) General arrangement of pumps and piping systems;
  - b) Fuel oil filling, transfer and service piping systems;
  - c) Bilge and ballast piping systems;
  - e) Liquid cargo pumping systems;
  - f) Hydraulic power piping systems for essential services;
  - g) Compressed air piping systems;
  - h) Steering gear piping systems;
  - i) Sea water and fresh water service piping systems;
  - j) Air and sounding piping systems;

- k) Steam and feed water piping systems
- l) Sanitary piping systems;
- m) Fire main and fire extinguishing piping

1.2.2 The plans are to include the information like, wall thickness, maximum working pressure temperature and material of all pipes and type, size and material of the valve fittings.

### **1.3 Materials**

1.3.1 The materials to be used in piping systems are to be suitable for the service intended. In general, except, where otherwise stated, pipes, valves and fittings are to be made of steel, cast iron, copper, alloy or other approved material.

1.3.2 Cast iron is not to be used for:-

- a) Shipside and collision bulkhead fittings;
- b) Outlet valves of fuel tanks with static head;
- c) Bilge and ballast lines passing through double bottom tanks, pipe tunnel and cargo oil tanks;
- d) Any piping which can be subjected to shock such as water hammer.

1.3.3 Materials sensitive to heat such as aluminum, lead or plastics, are not to be used in systems essential to the safe operation of the vessel.

### **1.4 Design Pressure**

1.4.1 The design pressure is considered to be, the most severe condition of co-incident pressure and temperature excepted in normal operation. For this purpose the maximum difference in pressure between inside and outside of the part is to be considered.

### **1.5 Design temperature**

1.5.1 Unless otherwise specified the temperature used in design is to be not less than the mean metal temperature (through the thickness) accepted under operating conditions for the part considered.

1.5.2 When sudden cyclic changes in temperature are apt to occur in normal operation with only minor pressure fluctuations, the design is to be governed by the highest probable operating temperature and corresponding pressure.

### **1.6 Redundancy**

1.6.1 Redundancy is the ability of a system or a component thereof to maintain or restore its function when one failure has occurred. This can be achieved for instance by installation of more units or alternative means for performing the function.

**1.7 Valves and cocks**

- 1.7.1 All the valves and cocks are to be so designed and constructed so that the valve covers or glands will not slacken up when the valves are operated.
- 1.7.2 All the valves are to be designed to close with right hand (clockwise when facing the end of the stem) motion of the wheel of the valve.
- 1.7.3 All the valves and cocks are to be fitted in places where they are easily accessible at all times and are to be fitted with legible name plates indicating their function in the system and their installation is to be such that it can be readily observed that they are open or closed.
- 1.7.4 All the valves and cocks fitted with remote control are to be provided with local manual control independent of the remote control system inoperable.
- 1.7.5 The valves, cocks and other fittings which are attached directly to plating, which is required to be of watertight construction, are to be secured to the plating by means of studs screwed into the plating and not by bolts passing through clearance holes. Alternatively the studs may be welded to the plating.

**1.8 Shipside fittings (Other than sanitary discharges and scuppers)**

- 1.8.1 Al sea inlet and over board discharge valves are to be fitted in either of the following ways:-
  - a) Directly on the shell plating;
  - b) To the plating of fabricated steel water boxes of rigid construction integral with the vessel's plating;
  - c) To short, rigid distance pieces welded to the shell plating.
- 1.8.2 All valves and cocks fitted directly to the shell plating are to have spigots extending through the plating. These spigot on valves may however be omitted if the valves are fitted on pads which themselves from spigots in way of plating.
- 1.8.3 Valves and cocks are to be attached to the shell plating by bolts tapped into the plating and fitted with countersunk heads, or by studs screwed into heavy pads fitted to the plating. The stud holes are not to penetrate the pad plating.
- 1.8.4 Vessel side valves and fittings, if made of steel or material with low corrosion resistance, are to be suitably protected against wastage.
- 1.8.5 Gratings are to be fitted at all openings in ship's side for inlet of seawater. The net area through the gratings is to be at least twice the area of the valves connected to the opening.

- 1.8.6 The scantlings of valves and valve stools fitted with steam, or compressed air clearing connections are to be suitable for the maximum pressure to which the valves and stools may be subjected.

**1.9 Piping installation**

- 1.9.1 Heavy pipes and valves are to be so supported that their weight is not taken up by connected pumps and fittings.
- 1.9.2 Support of the pipes is to be such that detrimental vibrations do not arise in the system.
- 1.9.3 Where pipes are carried through watertight bulkheads or tank tops, means are to be made to ensure the integrity of the water tightness of the compartment.
- 1.9.4 As far as possible, installation of pipes for water, oil, or steam, is to be avoided near electric switchboards. If this is impracticable, all the joints in pipe line and valves are to be at a safe distance from the switchboards and shielded to prevent damage to switchboard.
- 1.9.5 Provision is to be made to take care of expansion or contraction stresses in pipes due to temperature stresses or working of the hull.
- 1.9.6 Expansion pieces of approved type, made of oil resistant reinforced rubber or other approved material may be used in circulating water systems in machinery spaces.
- 1.9.7 All piping systems, where a pressure greater than the designed pressure could be developed, are to be protected by suitable relief valves.
- 1.9.8 All pipes, situated in cargo-spaces, fish holds or other spaces, where they can be damaged mechanically, are to be suitably protected.
- 1.9.9 All pipes which pass through chambers intended for the carriage or storage of refrigerated cargo are to be well insulated. In case the temperature of the chamber is below 0°C the pipes are to be insulated from the ship's structure also, except at positions where the temperature of ship's structure is always above 0°C and is controlled by outside temperature.

Air refreshing pipes leading to and from refrigerated chambers need not be insulated from the ship's structure.

## **Section 2**

### **Bilge and Ballast Piping System**

#### **2.1 General**

- 2.1.1 All vessels are to be provided with necessary pumps, suction and discharge piping and means of drainage so arranged that any compartment can be pumped out effectively, when the vessel is on an even keel and is either upright or has a list of not more than 5 degrees, through at least one suction, except from machinery spaces where at least two suctions are required, one of which is to be a branch bilge suction and the other is to be a direct bilge suction. Wing suctions will, generally, be necessary for this purpose, except for short narrow compartments, where a single suction may be sufficient.
- 2.1.2 All passenger vessels are to be provided with an efficient bilge pumping plant capable of pumping from and draining any watertight compartment under all practicable conditions after a casualty whether the vessel is upright or listed.
- 2.1.3 Attention is drawn to any relevant statutory requirements of the National Authority of the country in which the vessels is to be registered.

#### **2.2 Drainage of cargo holds**

- 2.2.1 In vessels having only one hold, and this over 30 (m) in length, bilge suctions are to be provided in the fore and after sections of the hold.
- 2.2.2 In vessels having a flat bottom with breadth exceeding 5 (m), bilge suctions are to be fitted at the wings.
- 2.2.3 Where close ceilings or continuous gusset plates are fitted over the bilges, arrangements are to be made whereby the water in the hold may find its way to the suction pipes.
- 2.2.4 In vessels fitted with double bottoms, suitable located bilge wells are to be provided.

#### **2.3 Drainage from fore and aft peaks**

- 2.3.1 Where the peaks are used as tanks, a power pump suction is to be led to each tank, except in case of small tanks (generally not exceeding 2 (m<sup>2</sup>)) used for the carriage of domestic fresh water where hand pumps may be used.
- 2.3.2 The peaks may be drained by hand pumps provided the peaks are not used as tanks and they are not connected to bilge main. The suction lift is to be well within the capacity of the hand pumps and is not to exceed 7.3 (m).

The after peak may be drained by means of a self-closing cock situated in a well-lighted and accessible position, and drained into engine room or tunnel.

- 2.3.3 The collision bulkhead is not to be pierced below the bulkhead deck by more than one pipe for dealing with the contents inside the fore peak tank except as permitted in 2.3.4. The pipe is to be provided with a screw down valve capable of being operated from above the bulk head deck and the chest of the valve is to be secured to the collision bulk head inside the tank except as permitted by.

- 2.3.4 An indicator is to be provided to indicate whether the valve is open or shut.

In vessels, other than passenger vessels, where the forepeak is divided into two compartments, the collision bulkhead may be pierced by two pipes, i.e. one for each compartment and fitted as in 2.3.3.

- 2.3.5 In vessels other than passenger vessels, the valve required by 2.3.3 may be fitted on the after side of the collision bulkhead, provided the valve is readily accessible at all times and is not subject to mechanical damage.

## **2.4 Drainage from tanks, cofferdams and void spaces**

- 2.4.1 All the tanks except self-draining tanks, whether for water ballast, oil fuel, liquid cargoes, etc. are to be provided with suction pipes led to suitable power pumps. The pumping plant is to be so arranged that any water or liquid within any compartment of the vessel can be pumped out through at least one suction, when the vessel is on an even keel and is either upright or has list of not more than 5 degrees.

- 2.4.2 Where the length of the ballast tank exceeds 30 (m), an additional suction is to be provided at the forward end of the tank. Where the width of the tank is unusually large, suction near the centerline in addition to wing suction may be required.

- 2.4.3 Suction pipes from the coffer dam and void spaces are to be led to the main bilge line.

- 2.4.4 In vessels where deep tanks may be used for either water ballast or dry cargo, provision is to be made for blanking the water ballast suction and filling when the tank is being used for carrying cargo and for blanking the bilge line when the tank is being used for carriage of water ballast.

## **2.5 Drainage from spaces above fore and after peaks and above machinery spaces**

- 2.5.1 Provision is to be made for the drainage of chain locker and watertight compartments above the after peak tank by hand or power pump suctions.

- 2.5.2 Steering gear compartments or other small enclosed spaces situated above the after peak tanks are to be provided with suitable means of drainage, either by hand or power bilge suctions.

2.5.3 If the compartments referred to in 2.5.2 are adequately isolated from the adjacent twin decks, they may be drained by scuppers of not less than 38 (mm) bore, discharging into the tunnel (or machinery spaces in case of vessels with machinery aft) and fitted with self-closing cocks situated in well lighted and visible positions. These arrangements are not specially approved in relation to sub division considerations.

2.5.4 Accommodation spaces which overhang machinery spaces may also be drained in 2.5.3.

## **2.6 Drainage from machinery spaces**

2.6.1 The bilge drainage arrangements for machinery spaces are to be in accordance with the requirements of 2.1.

2.6.2 In vessels in which the propelling machinery is situated at the after end of the vessel. It will generally be necessary for the bilge suction to be fitted in the forward wings as well as in the after end of the machinery space, but each case will be dealt with according to the size and structural arrangements of the compartment.

2.6.3 Where the machinery space is divided into watertight compartments, the drainage system for all compartments except for main engine room is to be same as for cargo hold except that one direct bilge suction from each watertight compartment would also be required.

## **2.7 Sizes of bilge suction**

2.7.1 The internal diameter of the bilge pipes is not to be less than that found by the following formula to the nearest 5 (mm) commercial size available:-

$$a) \quad d_m = 1.5\sqrt{L(B + D)} + 25(mm)$$

$$b) \quad d_m = 2.0\sqrt{C(B = D)} + 25(mm)$$

Where,

$d_m$  = internal diameter of bilge main (mm);

$d_b$  = internal diameter of branch bilge (mm);

L = Rule length of vessel (m);

B = Molded breadth of vessel (m);

C = Length of the compartment (m);

D = Molded depth to bulkhead deck (m).

2.7.2 In any case, bilge main suction line and branch bilge suction line diameters are not to be less than 40 (mm) and the diameter of that main bilge line is not be less than of the branch bilge line.



- 2.7.3 The internal diameter of the direct bilge suction is not to have less than the main bilge line when connected to a power pump and not less than branch bilge suction when connected to a hand pump.
- 2.7.4 In oil tankers and similar vessels, where the engine room pumps do not deal with bilge drainage outside the machinery spaces, the rule diameter of the bilge main may be reduced provided the proposed cross-sectional area of the bilge main is not less than twice that required for the branch bilge suction in machinery spaces.
- 2.7.5 The area of each branch pipe connecting the bilge main to a distribution chest is to be not less than the sum of the areas required by the rules for the two largest branch bilge suction pipes connected to that chest, but need not be greater than that required for the main bilge line.

## **2.8 Bilge pumps and ejectors**

- 2.8.1 In vessels with main propulsion engines up to 220 (kW) (300 shp), at least one power bilge is to be provided which may be driven by the main engines. In addition hand pump suctions are to be fitted. In vessels where the main propulsion engines power exceeds 220 (kW) (300 shp) at least two power bilge pumps are to be provided and at least one of which is to be independently driven. See also 2.11 for requirements regarding passenger vessels.
- 2.8.2 The capacity of the bilge pump may be found by the following formula:-  
$$Q = 5.75 \times 10^{-3} \times d^2 (\text{m}^3/\text{hour})$$
  
Where,  
 $Q$  = capacity of pump ( $\text{m}^3/\text{hour}$ )  
 $d$  = rule diameter of bilge main (mm).
- 2.8.3 In vessels, other than passenger vessels, where one bilge pump is of slightly less than rule capacity, the deficiency may be made good by an excess capacity of the other pump. In general this deficiency is to be limited to 30 percent.
- 2.8.4 An ejector in conjunction with a sea water pump may be accepted as a substitute for independent power bilge pump. This however, is not acceptable on passenger vessels.

## **2.9 Pump types**

- 2.9.1 The bilge pumps required by the rules are to be of self-priming type, unless an approved priming system is provided for these vessels.
- 2.9.2 General Service pumps and ballasts pumps may be accepted as independent power bilge pumps provided:-
- a) Their capacity is adequate and in accordance with 2.8.2;

- b) These pumps together with the pipelines to which they are connected, are fitted with necessary devices to ensure that there is no risk of entry of water or oil fuel in the holds or machinery spaces.

## **2.10 Bilge piping arrangements and fittings**

- 2.10.1 Bilge pipes are not, as far as possible, to pass through double bottom tanks. If unavoidable, such bilge pipes are to be of heavy gauge, with welded joints or heavy flanged joints and are to be tested after fitting to the same pressure as the tanks through which they pass.
- 2.10.2 The parts of bilge pipes passing through deep tanks, intended to carry water ballast, fresh water, liquid cargo or fuel oil are normally to be contained in a pipe tunnel, but where this is not done, the pipes are to be of heavy gauge with welded or heavy flange joints. The open ends of such pipes are to be fitted with non-return valves. The pipes are to be tested, after fitting, to a pressure of not less than the maximum head to which the tanks may be subjected.
- 2.10.3 Expansion bends, not glands, are to be fitted to pipes passing through double bottom tanks or deep tanks.
- 2.10.4 The intactness of the machinery spaces, bulkheads and of tunnel plating is not to be impaired by fitting of scuppers discharging into machinery spaces or tunnel from adjacent compartments which are situated below the bulkhead deck. These scuppers may, however, be led into a strong built scupper drain tank situated in the machinery space or tunnel but closed to these spaces and drained by means of a suction of appropriate size led from the main bilge line through a screw-down non-return valve.
  - a) The scupper tank air pipe is to be led above the bulkhead deck and provision is to be made for ascertaining the level of the water in the tank:
  - b) Where one tank is used for the drainage of several watertight compartments, the scupper pipes are to be provided with screw-down non-return valves.
- 2.10.5 No drain valve or cock is to be fitted to the collision bulkhead. Drain valves or cocks are not to be fitted to other watertight bulkheads if alternative means of drainage are practicable. These arrangements are not permissible in passenger vessels.
- 2.10.6 Where drain valves or cocks are fitted to bulkhead other, than collision bulkhead, as permitted by 2.10.5, the drain valves or cocks are to be at all times readily accessible and are to be capable of being shut off from positions above the bulkhead deck. Indicators are to be provided to show whether the drains are open or shut.

- 2.10.7 Bilge pipes which are required for draining cargo or machinery spaces are to be entirely distinct from sea inlet pipes or from pipes which may be used for filling or emptying spaces where water or oil is carried. This does not, however, exclude a bilge ejection connection, a connecting pipe from a pump to its suction valve chest, or a deep tank suction pipe suitably connected through a change-over device to bilge, ballast or oil line.
- 2.10.8 The arrangement of pumps, valves and piping is to be such that any pump could be opened up for over haul and repairs without affecting the operations of the other pumps.
- 2.10.9 The arrangement of valves, pumps, cocks and their pipe connections is to be such as to prevent the possibility of placing one watertight compartment in communication with another, or of cargo spaces, machinery spaces or other dry spaces coming in communication with the sea or the tanks. For this purpose the bilge suction, pipe of any pump also having sea suction is to be fitted with a non-return valve which cannot permit communication between the bilges and the sea or the compartments in use as tanks.
- 2.10.10 Screw-down non-return valves are to be provided in the following fittings:-
- a) Bilge distribution chest valves;
  - b) Direct bilge suction and bilge pump connection to main line;
  - c) Bilge suction hose connections on the pumps or on the main line;
  - d) Emergency bilge suction.
- 2.10.11 Bilge suction pipes from machinery spaces and shaft tunnel, except emergency bilge suction, are to be led from easily accessible mud boxes fitted with straight tail pipes to the bilges. The open ends of the tail pipes are not to be fitted with strum boxes. The mud boxes are to be provided with covers which can be easily opened and closed for cleaning purposes.
- 2.10.12 Strum boxes are to be fitted to the open ends of bilge suction pipes from the cargo holds. The diameter of holes from these strum boxes is not to be more than 10 (mm) and the total area of the holes is not to be less than twice the area of the pipes.
- 2.10.13 Where access manholes to bilge wells are necessary, they are to be fitted as near to the suction strums as practicable.
- 2.10.14 adequate distance is to be provided between the open ends of suction pipes and bilge well bottom to permit adequate and easy flow of water and to facilitate cleaning.

- 2.10.15 All the valves, cocks and mud boxes are to be located in easily accessible positions above or at the same level as the floor plates. Where this is unavoidable, they may be fitted immediately below the floor plates provided the floor plates are capable of being opened and closed easily and suitably name plates are fitted indicating the fittings below.
- 2.10.16 Where relief valves are fitted to pumps having sea connections, these valves are to be fitted in readily visible positions above the platform. The arrangement is to be such that any discharge from the relief valves will also be readily visible
- 2.10.17 Where non-return valves are fitted to the open ends of bilge suction pipes in cargo holds in order to decrease the risk of flooding, they are to be of an approved type which does not offer undue obstruction to the flow of water.

## **2.11 Additional requirements for passenger vessels**

- 2.11.1 Where practicable, the power bilge pumps are to be placed in watertight compartments so arranged or situated that these compartments will not readily be flooded by the same damage. If the engines and boilers are in two or more watertight compartments, the pumps available for bilge service are to be distributed throughout these compartments as far as is possible.
- 2.11.2 In passenger vessels the arrangements are to be such that at least one power pump is available for use in all ordinary circumstances in which a vessel may be flooded at sea. This requirement will be satisfied if:
- a) One of the required pumps is an emergency pump of reliable submersible type having a source of power situated above the bulkhead deck; OR
  - b) The pumps and their sources of power are so disposed throughout the length of the vessel that under any condition of flooding which the vessel is required by statutory requirements to withstand, at least one pump in undamaged compartment will be available.
- 2.11.3 Provision is to be made to prevent the compartment served by any bilge suction pipe being flooded in the event of the pipe being severed, or otherwise damaged by collision or grounding in any other compartment. For this purpose where the pipe is at any part situated nearer the side of the vessel than one-fifth the breadth of the vessel (measured at right angles to the centerline at the level of the deepest sub-division load line), or in a duct keel, a non-return valve is to be fitted to the pipe in the compartment containing the open end.

2.11.4 All the distribution boxes, cocks and valves in connection with the bilge pumping arrangements are to be in positions which are accessible at all times under ordinary circumstances. They are to be so arranged that, in the event of flooding, one of the bilge pumps may be operative on any compartment, in addition damage to a pump or its pipe connection to the bilge main outboard of a line drawn at one-fifth of the breadth of the vessel is not to put the bilge system out of action. If there is only one system of pipes common to all the pumps, the necessary cocks or vales for controlling the bilge suction must be capable of being operated from above the bulkhead deck. Where in addition to the main bilge pumping system and so arranged that a pump is capable of operating on any compartment under flooding conditions in that case only the cocks and valves necessary for the operation of the emergency system need be capable of being operated from above the bulkhead deck.

2.11.5 All valves and cocks mentioned in 2.11.4 which can be operated from above the bulkhead deck shall have their controls at their place of operation clearly marked and provided with means to indicate whether they are open or closed.

## **2.12 Ballast system**

2.12.1 Provision is to be made for ballasting and de-ballasting all the ballast tanks by pipe lines which are entirely separate and distinct from pipe lines used for bilging.

2.12.2 Where the length of the ballast tanks exceeds 30 (m), an additional suction is to be provided at the forward end of the tanks. Where the width of the tank is usually large, suction near the centerline in addition to wing suction may be required.

## **Section 3**

### **Air and Sounding Piping System**

#### **3.1 General**

3.1.1 Reference to oil in this section is to be taken to mean oil which has a flash point of 60° C or above (closed cup test).

3.1.2 The positions of vent, overflow and sounding pipes fitted above the weather deck are to be of steel.

3.1.3 Name plates are to be affixed to the upper ends of all vent and sounding pipes.

#### **3.2 Air pipes**

3.2.1 Vent pipes are to be fitted to all tanks, cofferdams, tunnels and other compartments which are not fitted with alternative ventilation arrangements.

- 3.2.2 The vent pipes are to be fitted at the opposite end of the tank to which the filling pipes are placed and / or at the highest part of the tank and are to be of the self draining type. Where the tank top is of unusual or irregular profile, special consideration will be given to the number and positions of the vent pipes.
- 3.2.3 Tanks provided with anodes for cathodic protection are to be provided with vent pipes at forward and aft ends.
- 3.2.4 Vent pipes to double bottom tanks, deep tanks extending to the shell plating or tanks which can be run up from the sea and sea chests are to be run up from the sea and sea chests are to be led above the bulkhead deck.
- 3.2.5 Vent pipes to oil fuel and cargo oil tanks, cofferdams, all tanks which can be pumped up, shaft tunnels and pipe tunnels are to be led above the bulkhead deck and to open air.
- 3.2.6 Vent pipes from lubricating oil storage tanks may terminate in the machinery spaces, provided that the open ends are so situated that issuing oil cannot come into contact with electrical equipment or heated surfaces.
- 3.2.7 The open ends of vent pipes to oil fuel and cargo oil tanks are to be situated where no danger will be incurred from issuing oil or vapor when the tank is being filled.
- 3.2.8 For details regarding height and closing devices for vent pipes see Pt.3, Ch.11.
- 3.2.9 The open ends of vent pipes to oil fuel, cargo oil and ballast tanks fitted with anodes for cathodic protection, are to be fitted with a wire gauze diaphragm of in-corrodible material which can be readily removed from cleaning. The clear area through the wire gauze is to be at least equal to the area of the vent pipe.
- 3.2.10 In the case of all tanks which can be pumped up either by vessel's pumps or by shore pumps through a filling main, the total cross-sectional area of the vent pipes to each tank, or of the overflow pipes where an overflow system is provided, is to be not less than 25 percent greater than the effective area of the respective filling pipes.

### **3.3 Sounding arrangements**

- 3.3.1 All tanks, cofferdams and pipe tunnels are to be provided with sounding pipes or other approved means for ascertaining the level of liquid in the tanks. Bilges of compartments which are not at all times readily accessible are to be provided with sounding pipes. The sounding are to be taken as near the suction pipes as practicable.
- 3.3.2 Where gauge glasses are used for indicating the level of liquid in tanks containing lubricating oil, oil fuel or other flammable liquid, the glasses are to be of heat resisting quality, adequately supported, protected from mechanical damage and fitted

with self-closing valves at the lower ends and at the top ends if these are connected to the tanks below the maximum liquid level.

- 3.3.3 Except as permitted by 3.3.4 sounding pipes are to be led to positions above the bulkhead deck which are at all time accessible and in the case of oil fuel tanks, cargo oil tanks and lubricating oil tanks, the sounding pipes are to be lead to safe positions on the open deck.
- 3.3.4 Short sounding pipes may be fitted to double bottom tanks and cofferdams in shaft tunnels and machinery spaces provided the pipes are to readily accessible. Short sounding pipes to oil fuel tanks, cargo oil tanks and lubricating oil tanks are not to be placed in the vicinity of boilers, pre-heaters, heated surfaces, electric generators or motor with commutator or collector rings or electric or electric appliances which are not totally enclosed. The short sounding pips are to be arranged in such a way that overflow or oil spray will not reach any of machinery components mentioned above. The short sounding pipes are to be fitted with self-closing cocks having cylindrical plugs with weight loaded levers permanently attached and with pedals for opening or other approved arrangements. Short sounding pipes to tanks not intended for oil are to be fitted with screw caps attached by chain to the pipe or with shut off cocks.
- 3.3.5 In passenger vessels, short sounding pipes are permissible only for sounding cofferdams and double bottom tanks situated in the machinery space and are in all cases to be fitted with self closing cocks as described in 3.3.4.
- 3.3.6 Striking plates of adequate thickness and size are to be fitted under open ended sounding pipes. Where slotted pipes having closed ends are employed, the closing plugs are to be of substantial construction.
- 3.3.7 The upper ends of all sounding pipes are to be provided with efficient closing devices. The sounding pipes are to be arranged to be as straight as practicable, and if curved the curvature is to be large enough to permit easy passage of sounding rod/chain.

## **Section 4**

### **Fuel Oil System**

#### **4.1 General**

- 4.1.1 Oil fuel for machinery and boilers is normally to have a flash point now lower than 60° C (closed cup test). For emergency generators engines, the oil fuel is to have a flash point not lower than 43° C (closed cup test).
- 4.1.2 Fuels with flash point lower than 60° C may be used in vessels intended for service restricted to geographical limits where it can be ensured that the temperature of the machinery and boiler spaces will always be 10° C below the flash point of fuel. In such case safety precautions and the arrangements for storage and pumping will be specially considered. However, the flash point of the fuel is not to be less than 43° C unless specially approved.

#### **4.2 Oil fuel tanks**

- 4.2.1 Oil fuel tanks are to be separated from fresh water and lubricating oil tanks by means of cofferdams.
- 4.2.2 Oil fuel tanks are not to be located directly above the highly heated surfaces.

#### **4.3 Oil fuel piping**

- 4.3.1 Oil fuel pressure pipes are to be led, where practicable, remote from heated surfaces and electrical appliances, but where this is impracticable the pipes are to have a minimum number of joints and are to be led in well lighted and readily visible positions.
- 4.3.2 Transfer, suction and other low pressure oil pipes and all pipes passing through oil storage tanks are to be made of cast iron or steel, having flanged joints suitable for a working pressure or not less than 0.69 (N/mm<sup>2</sup>). The flanges are to be machined and the jointing material is to be impervious to oil. Where the pipes are 25 (mm) bore or less, they may be seamless copper alloy, except those which pass through storage tanks.
- 4.3.3 Pipes in connection with compartments storing fresh water are to be separate and distinct from any pipes which may be used for oil or oily water and are not to be led through tanks which contain oil, nor are oil pipes to be led through fresh water tanks.
- 4.3.4 Pipes conveying vegetable oils or similar cargo oils are not to be led through oil fuel tanks, nor are oil fuel pipes to be led through tanks containing such cargoes.



- 4.3.5 In passenger vessels, provision is to be made for the transfer of oil fuel from any oil fuel storage or settling tank to any other oil fuel storage tanks.

#### **4.4 Arrangement of valves, cocks, pumps and fittings**

- 4.4.1 The oil fuel and pumping piping arrangements are to be distinct from other pumping systems as far as practicable and the means provided for preventing dangerous inter connection in service are to be thoroughly effective.
- 4.4.2 All valves and cocks forming part of the oil fuel installation are to be capable of being controlled from readily accessible positions which, in the machinery spaces are to be above the working platform.
- 4.4.3 Every oil fuel suction pipe from a double bottom tank is to be fitted with a valve or a cock.
- 4.4.4 For oil fuel tanks which are situated above the double bottom tanks the inlet and outlet, pipes which are connected to the tank at a point lower than the outlet of the overflow pipe or below the top of the tanks without an overflow pipe, are to be fitted with shut off valves located on the tank itself.
- 4.4.5 In the machinery spaces valves, mentioned in 4.4.4, are to be capable of 'being closed locally and from positions outside these spaces which will always be accessible in the event of fire occurring in these spaces. Instructions for closing the valves are to be indicated at the valves and at the remote control positions.
- 4.4.6 Settling tanks are to be provided with means of draining water from bottom of the tanks. If the settling tanks are not provided, the oil fuel bunkers or daily service tanks are to be fitted with water drains.
- Open drains for removing water from oil tanks are to be fitted with valves or cocks of self-closing type and suitable provision is to be made for collecting the oily discharge.
- 4.4.7 Where a power driven pump is necessary for transferring oil fuel, a stand by pump is to be provided and connected ready for use, or alternatively, emergency connections may be made to another suitable power driven pump.
- 4.4.8 All pumps which are capable of developing a pressure exceeding the design pressure of the system are to be provided with relief valves. Each relief valve is to be in close circuit i.e. arranged to discharge back to the suction side of the pump and to effectively limit the pump discharge pressure to the design pressure of the system.
- 4.4.9 Valves or cocks are to be interposed between the pumps on the suction and discharge pipes in order that any pump may be shut off for opening up and over haul.

- 4.4.10 Drip trays are to be fitted under all oil fuel appliances which are required to be opened up frequently for cleaning or adjustment.

#### **4.5 Filling arrangements**

- 4.5.1 The bunkering of the vessel is to be carried out through a permanently fitted pipeline, provided with the required fittings and ensuring fuel delivery to all storage tanks. The open end of the fitting pipe is to be led to the tank bottom.

In passenger vessels fuel bunkering stations are to be isolated from other spaces and are to be efficiently drained and ventilated.

- 4.5.2 Provision is to be made against over-pressure in the filling pipes, and any relief valve fitted for this purpose is to be discharged in to an overflow tank or other safe position.

#### **4.6 Oil fuel burning arrangements**

- 4.6.1 Filters are to be fitted in the supply lines to the main and auxiliary machinery. For non-redundant units for essential services, it must be possible to clean the filters without stopping the unit or reducing the supply of the filtered oil to the unit.

For auxiliary engines one single oil fuel filter for each engine may be accepted.

- 4.6.2 Where an oil fuel booster pump is fitted, which is essential to the operation of the main engine (s), a standby pump is to be provided. The standby pump is to be connected ready for immediate use but where two or more main engines are fitted, each with its own pump, a complete spare pump may be accepted provided that it readily accessible and can be easily installed.

- 4.6.3 Where pump are provided for fuel valve cooling, the arrangements are to be as in 4.6.2.

#### **4.7 Remote stop of oil fuel pumps and fans**

- 4.7.1 Emergency stop for power supply to the following pumps and fans is to be arranged from a central place outside the engine and boiler room:-

- Oil fuel transfer pump;
- Oil fuel booster pump;
- Nozzle cooling pumps when oil fuel is used as coolant;
- Oil fuel purifiers;
- Pumps for oil-burning installations;
- Fans for ventilation of engine rooms.

## **Section 5**

### **Engine Cooling Water Systems**

#### **5.1 General**

5.1.1 Centrifugal cooling water pumps are to be installed as low as possible in the vessel.

#### **5.2 Cooling water main supply**

5.2.1 Provision is to be made for an adequate supply of cooling water to the main propelling machinery and essential auxiliary engines, also to lubricating oil and fresh water coolers, where these coolers are fitted. The cooling water pump(s) may be worked from the engines or be driven independently.

#### **5.3 Cooling water stand by supply.**

5.3.1 Provision is also to be made for a separate supply of cooling water from a suitable independent pump of adequate capacity.

5.3.2 The following arrangements are acceptable, depending on the purpose for which the cooling water is intended:

- a) Where only one main engine, with power exceeding 370 (kW) (500 shp), is fitted, the standby pump is to be connected ready for immediate use;
  - b) Where more than one main engine is fitted, each with its own pump, a complete spare pump of each type may be accepted;
  - c) Where fresh water cooling is employed for main / auxiliary engines, a standby means of cooling need not be fitted if there are suitable emergency connections from alt water system;
  - d) Where each auxiliary is fitted with a cooling water pump, standby means of cooling need not be provided auxiliaries. Where, however a group of auxiliaries is supplied with cooling water from a common system, a standby cooling water pump is to be provided for this system. This pump is to be connected ready for immediate use and may be a suitable general service pump.
- 5.3.3 When selecting a pump for standby purposes, consideration is to be given to the maximum pressure which it can develop if the overboard discharge valve is partly or fully closed and, when necessary, condenser doors, water boxes, etc. are to be protected by an approved device against inadvertent over pressure.

**5.4 Relief valves on cooling water pumps**

- 5.4.1 Where cooling water pumps can develop a pressure head greater than the design pressure of the system, they are to be provided with relief valves on the pump discharge to effectively limit the pump discharge pressure to the design pressure of the system.

**5.5 Sea inlets for cooling water pumps**

- 5.5.1 Sea-water cooling systems for main and auxiliary machinery are to be connected to at least two cooling water inlets preferably on opposite sides of the vessel.
- 5.5.2 Where sea water is used for the direct cooling of main engines and auxiliaries, the sea water suction pipes are to be provided with strainers which can be cleaned without interrupting the cooling water supply.

**Section 6****Lubricating Oil Piping System****6.1 General**

- 6.1.1 Lubricating oil systems are to be entirely separated from other systems. This requirement, however, does not apply to hydraulic governing and maneuvering systems for main and auxiliary engines.
- 6.1.2 Lubricating oil tanks are to be separated from other tanks containing water, fuel oil or cargo oil by means of cofferdams.

**6.2 Pumps**

- 6.2.1 Where lubricating oil for the main engines (s) is circulated under pressure, a standby lubricating oil pump is to be provided where one engine is fitted and the output of the engine exceeds 370 (kW) (500 shp).
- 6.2.2 Satisfactory lubrication of the engines is to be ensured while starting and maneuvering.
- 6.2.3 Similar provisions to those of 6.2.1 and 6.2.2 are to be made where separate lubricating oil systems are employed for piston cooling, reduction gearing, oil operated couplings and controllable pitch propellers, unless approved alternative arrangements are provided. Where the oil glands for stern tubes are provided with oil circulating pump, and the continuous running of this pump is necessary during normal operation, then a standby pump for this purpose is to be provided.
- 6.2.4 Independently driven rotary type pumps are to be fitted with non-return valves on the discharge side of the pumps.

- 6.2.5 A relief valve in close circuit is to be fitted on the pump discharge if the pump is capable of developing a pressure exceeding the design pressure of the system, the relief valve is to be effectively limit the pump discharge pressure to the design pressure of the system.

### **6.3 Control of pumps and alarms**

- 6.3.1 The power supply, to all independently driven lubricating oil pumps is to be capable of being stopped from a position outside the space which will always be accessible in the event of fire occurring in the compartment in which they are situated, as well as from the compartment itself.
- 6.3.2 All main and auxiliary engines intended for essential services are to be provided with means of indicating the lubricating oil pressure supply to them. Where such engines and turbines are of more than 75 (kW) (100 shp), audible and visual alarms are to be fitted to given warning of an appreciable reduction in pressure of the lubricating oil supply. Further, these alarms are to be actuated from the outlet side of any restrictions, such as filters, coolers, etc.

### **6.4 Filters**

- 6.4.1 In systems, where lubricating oil is circulated under pressure, provision is to be made for efficient filtration of the oil. For non-redundant units, for essential service, it must be possible to clean the filters without stopping the unit or reducing the supply of filtered oil to the units.

### **6.5 Valves and cocks on lubricating oil tanks**

- 6.5.1 Outlet valves and cocks on lubricating oil service tanks, other than double bottom tanks, situated in machinery spaces are to be capable of being closed locally from position outside the space which will always be accessible in the event of fire occurring in these spaces. Remote controls need only be fitted to outlet valves and cocks which are open in normal service and are not required for other outlets such as those on storage tanks.

## **Section 7**

### **Engine Exhaust Gas Piping Systems**

#### **7.1 General**

- 7.1.1 Where the surface temperature of the exhaust pipes and silencer may exceed 220° C, they are to be water cooled or efficiently lagged.

- 7.1.2 Where lagging covering the exhaust piping including flanges, is oil-absorbing or may permit penetration of oil, the lagging is to be encased in sheet metal or equivalent. In locations where the surveyor is satisfied that oil impingement could not occur, the lagging need not be encased.
- 7.1.3 Exhaust pipes which are led overboard near the waterline are to be protected against the possibility of water finding its way in board.  
Where the exhaust is cooled by water spray, the exhaust pipes are to be self-draining overboard.
- 7.1.4 Exhaust pipes of two or more engines are not to be connected together, but are to be led separately to the atmosphere unless arranged to prevent the return of the gases to an idle engine.
- 7.1.5 In two-stroke engines fitted with exhaust gas turbo-chargers which operate on the impulse systems, provision is to be made to prevent broken piston rings entering the turbine casing and causing damage to blades and nozzle rings.

## **Section 8**

### **Pumping and Piping Systems for Vessels not fitted with Propelling Machinery**

#### **8.1 Scope**

- 8.1.1 Following requirements are applicable to vessels not fitted with propelling machinery.

#### **8.2 Vessels without auxiliary power**

- 8.2.1 Hand pumps are to be fitted in number and position, as may be required for the efficient drainage of the vessel.
- 8.2.2 In general, one hand pump is to be provided for each compartment. Alternatively, two pumps connected to a bilge main, having at least one branch to each compartment are to be provided through non-return valves.
- 8.2.3 The hand pumps are to be capable of being worked from the upper deck or from positions above the load waterline which are at all times readily accessible. The suction list is not to exceed 7.3 (m) and is to be well within the capacity of the pump.
- 8.2.4 The pump capacity is to be based upon the diameter of the suction pipe required for compartment and as determined in Sec. 2.

#### **8.3 Vessels with auxiliary power**

- 8.3.1. In vessels in which auxiliary power is available on board, power pump suctions are to be provided for dealing with the drainage of tanks and of the bilges of the principal compartments.
- 8.3.2. The pumping arrangements are to be as required for self-propelled vessels, so far as these requirements are applicable.

**Chapter 4**  
**Prime Movers and Propulsion Shafting Systems**  
**Contents**

**Section**

- 1 General
- 2 Main Propulsion Shafting
- 3 Propellers
- 4 Vibrations and Alignment

**Section 1**

**General**

**1.1 General**

- 1.1.1 The requirements of this Chapter are applicable to all vessels but may be modified for vessels intended for special services.
- 1.1.2 Prime movers of electric generators of less than 50 (kW) capacity, supplying power for lightening loads only, when the vessel is in harbor, need not be built under survey.
- 1.1.3 Attention is drawn to any relevant statutory requirements of the country in which the vessel is to be registered.
- 1.1.4 Power transmission systems not specified in this Chapter will be specially considered.

**1.2 Materials**

- 1.2.1 Materials intended for the main parts of the prime movers and power transmission systems are to be manufactured and tested in accordance with the requirements of Pt. 2, inspection and testing of materials, of rules & rules for the constructions and classification of steel vessels.

**1.3 Prime movers and reduction gearing**

- 1.3.1 Prime movers and reduction gearing are to be designed, manufactured and tested in accordance with the requirements of Rules and Rules for the Construction & Classification of Steel Vessels.

**1.4 Turning Gear**

- 1.4.1 Arrangements are to be provided to turn the prime movers of main propulsion systems and auxiliary drives.

## **Section 2**

### **Main Propulsion Shafting**

#### **2.1 Scope**

- 2.1.1 The requirements of this section relate, in particular, to formulae for determining the diameters of shafting for main propulsion installations, but requirements for couplings, coupling bolts, keys, keyways, stern bushes and associated components are also included. The diameter of shafting as calculated may require to be modified as a result of alignment considerations and vibration characteristics (See Sec. 8) or the inclusion of stress raises, other than those contained in this section.

#### **2.2 Plans and Particulars**

- 2.2.1 The following plans, in triplicate, together with the necessary particulars of the machinery, including the maximum power and revolutions per minute, are to be submitted for approval before the work is commenced:-

- Final gear shaft;
- Thrust shaft;
- Intermediate shafting;
- Tube shaft, where applicable;
- Tail shaft;
- Stern bush.

- 2.2.2 The specified minimum tensile strength of each shaft is to be stated.

- 2.2.3 A shafting arrangement plan indicating the relative position of the main engines, flywheel, flexible couplings, gearing, thrust block, line shafting and bearing, stern tube, 'A' brackets and propeller, as applicable, is to be submitted for information.

#### **2.3 Materials for shafting**

- 2.3.1 The materials are to comply with the relevant requirement of Ch.5, Pt.2, Inspection and Testing of Materials, of Rules & Rules for the Construction and Classification of Steel Vessels. The specified minimum tensile strength of forgings is to be selected within the following general limits:-

- a) Carbon and carbon-manganese steel – 400 – 600 (N/m<sup>2</sup>)
- b) Alloy steels – Not exceeding 800 (N/m<sup>2</sup>)

- 2.3.2 Ultrasonic tests are required on shaft forgings where the diameters is 250 (mm) or greater.



## 2.4 Intermediate and thrust shafts

2.4.1 The diameter,  $d$  of the shaft is to be not less than determined by the following formula:-

$$d = 103. k a \sqrt[3]{\frac{410P}{(U+160)R}} \text{ (mm)}$$

Where,

$a = 0.95$  for turbine installations, electric propulsion installations and oil engine installations with slip type couplings;

$= 1.0$  for other oil engine installations;

$k = 1.0$  for shafts with integral couplings flanges complying with 2.7 or shrink fit couplings;

$= 1.10$  for shafts with keyways, where the fillet radii in the transverse section of the bottom of the keyway are not to be less than  $0.0125 d$ ; after a length of  $0.2 d$  from the end of the keyway, the shaft diameter may be reduced to the diameter calculated with  $k = 1.0$ ;

$= 1.0$  for shafts with transverse or radial holes, where the diameter of the hole is not greater, than  $0.3 d$ ;

$= 1.20$  for shafts with longitudinal slots having a length of not more than  $1.4 d$  and a width of not more than  $0.2 d$ , where  $d$  is calculated with  $k = 1.0$ ;

$U$  = Specified minimum tensile strength of the material ( $\text{N/mm}^2$ )

$P$  = maximum shaft power (kW);

$R$  = Revolution per minute corresponding to maximum shaft power giving maximum torque.

2.4.2 For shafts with design features other than stated in 2.4.1 the value of  $k$  will be specifically considered.

## 2.5 Tail shafts and tube shafts

2.5.1 The diameter,  $d_p$ , of the tail shaft immediately forward of the forward face of the propeller boss or, if applicable, the forward face of the tail shaft flange, is to be not less than determined by the following formula:-

$$d_p = 103. k a \sqrt[3]{\frac{410P}{(U+160)R}} \text{ (mm)}$$

Where,

$k = 1.22$  for a shaft carrying a keyless propeller, or where the propeller is attached to an integral flange, and where the shaft is fitted with continuous liner or is oil lubricated and provided with an approved type of oil sealing gland;

$= 1.26$  for a shaft carrying a keyed propeller, and where the shaft is fitted with a continuous liner or is oil lubricated and provided with an approved type of oil sealing gland;

$= 1.25$  for a shaft carrying a keyless propeller, or where the propeller is attached to an integral flange and is fitted with water lubricated bearing with non-continuous shaft liners;

$= 1.29$  for a shaft carrying a keyed propeller and is fitted with water lubricated bearings with non-continuous shaft liners;

$U$  = Specified minimum tensile strength of the shaft ( $\text{N/mm}^2$ ), but is not to be taken greater than  $600 \text{ (N/m}^2\text{)}$ ;

$P$ ,  $a$  and  $R$  are defined in 2.4.1

2.5.2 The diameter,  $d_p$  of the tail shaft determined in accordance with the formula in 2.5.1 is to extend over a length not less than that to the forward edge of the bearing immediately forward of the propeller of  $2.5 d_p$  whichever is the greater.

2.5.3 The diameter of the portion of the tail shaft and tube shaft forward of the length required by 2.5.2 to the forward end of the forward stern tube seal is to be determined in accordance with the formula in 2.5.1 except that;

$k = 1.15$  where  $k = 1.22$  or  $1.26$  as required by 2.5.1

$k = 1.18$  where  $k = 1.25$  or  $1.29$  are required by 2.5.1

The change of diameter from that required by 2.5.1 to that required by this clause should be gradual.

2.5.4 The taper of the shaft cone is normally not to be steeper than 1:12 on diameter in case of keyed shafts and 1:15 on diameter in case of key less shafts.

2.5.5 Tail shafts which run in stern tubes and tube shafts may have the diameter forward of the forward stern tube seal gradually reduced to the diameter of the intermediate shaft. Abrupt changes in shaft section at the tail shaft / tube shaft to intermediate shaft couplings is to be avoided.

## **2.6 Hollow shafts**

2.6.1 For hollow shafts where the bore exceeds 40 percent of the outside diameter of minimum shaft diameter is not to be less than that given by the following equation:-

$$d_0 = d \sqrt[3]{\left(1 - \left(\frac{d_1}{d_0}\right)^4\right)} (mm)$$

where,

$d_0$  = outside diameter (mm).

$d$  = Rule size diameter of shaft (mm), calculated in accordance with 2.4 or 2.5

$d_1$  = diameter of central hole (mm).

- 2.6.2 Where the diameter of the central hole does not exceed 0.4 times the outside diameter, no increase over rule size need be provided.

## 2.7 Integral couplings

- 2.7.1 The thickness of coupling flanges is not to be less than the minimum required diameter of the coupling bolts calculated as in para 2.9, where  $U_B$  = or 0.2times the rule diameter of the shaft under consideration, whichever is greater.
- 2.7.2 The fillet radius at the base of the coupling flange is to be not less than 0.08 of the diameter of the shaft at the coupling. The fillets are to have a smooth finish and are not to be recessed in way of nuts and bolt heads.
- 2.7.3 Where the propeller is attached by means of flange, the thickness of the flange is to be not less than 0.25 times the actual diameter of the adjacent part of the tail shaft. The fillet radius at the base of the coupling flange is to be not less than 0.125 times the diameter of the shaft at the coupling.

## 2.8 Demountable couplings

- 2.8.1 Couplings are to be made of steel or other approved ductile material. The strength of demountable couplings and keys is to be equivalent to that of the shaft. Couplings are to be accurately fitted to the shaft.
- 2.8.2 Hydraulic and other shrink fit couplings will be specifically considered upon submittal of detailed pre-loading and stress calculations and fitting instructions. In general, the torsional holding capacity is to be at least 2.8 times the transmitted torque and pre-load stress is not to exceed 70 percent of the yield strength.
- 2.8.3 Provision is to be made to resist astern pull.

## 2.9 Coupling bots

- 2.9.1 The diameter of the coupling bolts of the fitted type at the joining faces of the coupling is to be not less than that given by the following formula:-

$$d_b = \sqrt{\frac{0.427 d^3 (U+155)}{N D U_B}} (mm)$$

Where,

$d_b$  = diameter of the fitted coupling bolts (mm);

$d$  = required diameter (mm) for the shaft in accordance with 2.4 or 2.5 as appropriate calculated by taking the value of  $k$  as 1.0;

$U$  = specified minimum tensile strength of the shaft material in (N/mm<sup>2</sup>);

$U_B$  = specified minimum tensile strength of the bolt material in (N/mm<sup>2</sup>);

and also  $U \leq U_B \leq 1.7 U$ ;

$N$  = Number of bolts in the coupling;

$D$  = Pitch circle diameter of bolt holes (mm).

- 2.9.2 The diameter of the non-fitted bolts will be specially considered upon the submittal of detailed pre-loading and stress calculations and fitted instructions.

## **2.10 Tail shaft liners**

- 2.10.1 The thickness  $t$ , of bronze or gunmetal liners fitted on tail shafts, in way of bearings, is not to be less than given by following formula:-

$$t = \frac{168 + d_p}{28} \text{ (mm)}$$

Where,

$t$  = thickness of liner (mm);

$d_p$  = diameter of tail shaft under the liner (mm)

- 2.10.2 The thickness of the continuous liner between the bearings is not to be less than 0.75t.
- 2.10.3 Continuous liners are preferably to be cast in one length. If made of several lengths, the joining of the separate pieces is to be made by welding through the whole thickness of liner before shrinking. In general, the load content of the gunmetal of each length forming a butt welded liner is not to exceed 0.5 percent. The composition of the electrode or filler rods it to be substantially lead free.
- 2.10.4 The liners are to withstand a hydraulic, pressure of 0.2 (N/mm<sup>2</sup>) after rough machining.
- 2.10.5 The liners are to be carefully shrunk or forced upon the shaft by hydraulic pressure, and they are not to be secured by pins.
- 2.10.6 Effective means are to be provided for preventing water from reaching the shaft at the part between the after end of the liner and the propeller boss.
- 2.10.7 If the liner does not fit the shaft tightly between the bearing portions in the stern tube, the space between the shaft and the liner is to be filled with a plastic insoluble non-corrosive compound.

**2.11 Keys and keyways**

- 2.11.1 Round ended or sled-runner ended keys are to be used, and the key ways in the propeller boss and cone of the tail shaft are to be provided with a smooth fillet at the bottom of the keyways. The radius of the fillet is to be at least 0.0125 of the diameter of the tail shaft at the top of the cone. The sharp edges at the top of the keyways are to be removed.
- 2.11.2 Two screwed pins are to be provided for securing the key in the keyway and the forward pin is to be placed at least one-third of the length of the key from the end. The depth of the tapped holes for the screwed pins is not to exceed the pin diameter and the edges of the holes are to be slightly beveled.
- 2.11.3 The distance between the top of the cone and the forward end of the keyway is to be not less than 0.2 of the diameter of the tail shaft at the top of the cone.
- 2.11.4 The effective sectional area of the key in shear, is to be not less than  $\frac{d^3}{2.6d_1} (mm^2)$

Where,

d = diameter (mm), required for the intermediate shaft determined in accordance with 2.4, based on material having a specified minimum tensile strength of 400 (N/mm<sup>2</sup>);

d<sub>1</sub> = diameter of shaft at mid-length of the key (mm).

**2.12 Stern tube and bearings**

- 2.12.1 The length of the bearing in the stern bush next to and supporting the propeller is to be as follows:-
- (a) For water lubricated bearings which are lined with lignum vitae, rubber composition or staves of approved plastic material; the length is to be not less than 4 times the rule diameter required for the tail shaft under the liner.
  - (b) For bearings which are white-metal lined, oil lubricated and provided with an approved type of oil sealing gland; the length of the bearing is to be approximately twice the rule diameter required for the tail shaft and is to be such that the nominal bearing pressure will not exceed 0.8 (N/mm<sup>2</sup>). The length of the bearing is to be not less than 1.5 times its rule diameter.
  - (c) For bearing of cast iron, bronze which are oil lubricated and fitted with an approved oil sealing gland; the length of the bearing is, in general, to be not less than 4 times the rule diameter required for tail shaft;
  - (d) For bearing which are grease lubricated; the length of bearing is to be not less than 4 times the rule diameter required for the tail shaft;

- (e) For water lubricated bearing lined with two or more circumferentially spaced sectors of an approved plastics material, in which it can be shown that the sectors operate on hydrodynamic principles, the length of the bearing is to be such that the nominal bearing pressure will not exceed  $0.55 \text{ (N/mm}^2\text{)}$ . The length of the bearing is not to be less than twice actual diameter of shaft.
- 2.12.2 Forced water lubrication is to be provided for all bearings lined with rubber or plastics and for those bearings lined with lignum vitae where the shaft diameter is 380 (mm) or over. The supply water may come from a circulating pump or other pressure source. The water grooves in the bearings are to be of ample section and of a shape which will be little affected by wear down, particularly for bearings of the plastic type.
- 2.12.3 The shut off valve or cock controlling the supply of water is to be fitted direct to the after peak bulk head, or to the stern tube where the water supply enters the stern tube be forward of the bulk head.
- 2.12.4 Where a tank supplying lubricating oil to the stern tube is fitted, it is to be located above the load water line and is to be provided with a low level alarm device in the engine room.
- 2.12.5 Where stern bush bearings are oil lubricated, provision is to be made for cooling the oil by maintaining water in the after peak tank above the level of the stern tube or by other approved means. Means of ascertaining the temperature of the oil in the stern bush are also to be provided.
- 2.12.6 The oil seating glands used for stern tube bearing, which are oil lubricated, are to be of approved type.

### **Section 3**

#### **Propellers**

##### **3.1 Scope**

The requirements of this section cover the construction, material and in section of propellers.

##### **3.2 Plans and particulars**

- 3.2.1 A plan in triplicate, of the propeller is to be submitted for approval, together with the following particulars:-

- a) Maximum shaft power, P, in (kW);

- b) Revolutions per minute of the propeller at maximum power, R;
- c) Propeller diameter, D(m);
- d) Pitch at 25 percent radius (for solid propellers only).  $P_{0.25}(m)$ ;
- e) Pitch at 35 percent radius (for controllable pitch propellers only)  $P_{0.35}(m)$ ;
- h) Pitch at 70 percent radius,  $P_{0.7}, (m)$ ;
- g) Length of blade section of the expanded cylindrical section 15 25 percent radius (for solid propeller only),  $P_{0.7}, (m)$
- h) Length of blade section of expanded cylindrical section are 35 percent radius (for controllable pitch propellers only)  $L_{0.35}$  in (mm);
- i) Rake at blade tip measured at shaft axis (backward rake positive forward rake negative). K in (m);
- j) Number of blades N;
- k) Developed area ratio, a.

### 3.3 Materials

- 3.3.1 Castings for propellers and propeller blades are to comply with the requirement of Ch. 8 Pt.2, Inspection and Testing of Materials of Rules & Rules for the Construction and Classification of Steel Vessels. The specified minimum tensile strength is to be not less than started in Table 3.4.1.
- 3.3.2 When it is proposed to use materials which are not included in Table 3.4.1, details of the chemical composition, mechanical properties and density are to be submitted for approval.

### 3.4 Design

#### 3.4.1 Minimum blade thickness

- 3.4.1.1 Where the propeller blades are of conventional design, the thickness, t, of the propeller blades at 25 percent radius for solid propellers, at 35 percent for controllable pitch propellers, neglecting any increase due to fillets is to be not less than:-

- a) For fixed propeller

$$t_{0.25} = 1003 \sqrt{\frac{AP}{C_n CRN} + \frac{0.024BKC_2}{CC_n}} (mm)$$

- b) For controllable pitch propellers

$$t_{0.25} = 805 \sqrt{\frac{AP}{C_R CRN} + \frac{0.015BKC_s}{CC_n}} (mm)$$

Where,

$t_{0.25}$  = minimum blade thickness required at 25 percent radius;

$t_{0.35}$  = minimum blade thickness required at 35 percent radius;

$C_n$  = Section modulus coefficient at 25 percent radius or 35 percent radius as applicable;

$$= \frac{l_0}{U_f L T^2} \text{ and is not to be taken greater than } 0.10;$$

$l_0$  = Moment of inertia of the expanded cylindrical section at 25 percent radius or 35 percent radius, as applicable about a straight line passing through the center of gravity parallel to the pitch line or to the nose-tail line, in (mm<sup>4</sup>);

$U_f$  = maximum normal distance from the moment of inertia axis to points on the face boundary (tension side) of the section at 25 percent radius or 35 percent radius, as applicable (mm);

$L$  = Length of the blade section of the expanded cylindrical section at 25 percent radius or 35 percent radius, as applicable, (mm);

$T$  = Maximum thickness of the expanded cylindrical section at 25 percent radius or 35 percent radius, as applicable, (mm);

$C_2$  = Section area sufficient at 25 percent radius or 35 percent radius as applicable;  
 $= \frac{a_2}{LT}$

$a_s$  = area of the expanded cylindrical section at 25 percent radius or 35 percent radius, as applicable (mm<sup>2</sup>);

$f$  = material constant as per Table 3.4.1;

$w$  = material constant as per Table 3.4.1;

a) For fixed-pitch propellers

$$A = 1.0 + \frac{6.0 D}{P_{0.7}} + \frac{4.3 P_{0.25}}{D}$$

$$B = \left( \frac{4300 w a}{N} \right) \left( \frac{R}{100} \right)^2 \left( \frac{D}{200} \right)^3$$

$$C = \left( 1 + \frac{1.5 P_{0.25}}{D} \right) (L_{0.25} f - B)$$

b) For controllable pitch propellers

$$A = 1.0 + \frac{6.0 D}{P_{0.7}} + \frac{3.0 P_{0.35}}{D}$$

$$B = \left( \frac{4900 w a}{N} \right) \left( \frac{R}{100} \right)^2 \left( \frac{D}{20} \right)^3$$

$$C = \left( 1 + \frac{1.5 P_{0.35}}{D} \right) (L_{0.35} f - B)$$



3.4.1.2 Propellers of unusual design or application will be subject to special consideration upon submittal of detailed stress calculations.

3.4.1.3 Fillets at the root of the blades are not to be considered in the determination of blade thickness.

| <b>Table 3.4.1 : Material constants</b>  |  |          |          |
|--|--|----------|----------|
| <b>Material</b>  | <b>Specified min.<br/>UTS (N/mm<sup>2</sup>)</b> | <b>f</b> | <b>W</b> |
| Manganese bronze Grade Cu 1  | 440  | 22.6     | 8.3      |
| Ni-Manganese bronze Grade Cu 2   | 440  | 22.9     | 8.0      |
| Ni-Aluminum bronze Grade Cu 3  | 590  | 22.7     | 7.5      |
| Min-Aluminum bronze Grade Cu 4   | 630  | 25.6     | 7.5      |
| Cast Iron  | 250  | 11.77    | 7.2      |
| Carbon and low alloy Steels  | 400  | 14.0     | 7.9      |
| Note:- The value of f may be increased by 10 percent for twin screw and outboard propellers of triple screw vessels. |  |          |          |

### 3.4.2 Key less propellers

3.4.2.1 Where propellers are fitted without keys, detailed stress calculations and fitting instructions are to be submitted for approval.

### 3.4.3 Controllable pitch propellers

3.4.3.1 In the case of controllable – pitch propellers, means are to be provided to lock the blades in ahead position in case of the failure of the pitch operating mechanism.

3.4.3.2 A propeller pitch indicator is to be fitted at each station from which it is possible to control the pitch of the propeller.

## 3.5 Fitting of propellers

3.5.1 The propeller boss is to be a good fit on the tail shaft cone. The forward edge of the bore of the propeller boss is to be rounded to about 6 (mm) radius.

3.5.2 The exposed part of the tail shaft is to be protected from action of water by filling all spaces between propeller hub, cap and shaft with suitable filling material. The propeller assembly is to be sealed at the forward end with a well-fitted soft rudder packing ring. When the rubber ring is fitted in an external gland, the hub counter bore

is to be filled with suitable material, and clearances between shaft liner and hub counter bore are to be kept to a minimum.

When the rubber ring is fitted internally, ample clearance is to be provided between the liner and hub and the ring is to be sufficiently sized to squeeze in to the clearance space when the propeller is driven up on the shaft and, where necessary, a filler piece is to be fitted in the propeller – hub keyway to provide a flat unbroken seating for the ring. The recess formed at the small end of the taper by the overhanging propeller hub is to be packed with red lead putty or rust-preventing compound before the propeller nut is put on.

- 3.5.3 Effective means are to be provided to prevent the slackening of the propeller nut.

## **Section 4**

### **Vibrations and Alignment**

#### **4.1 Scope**

- 4.1.1 The requirements of the section are applicable to main propulsion system with power exceeding 200 (kW).
- 4.1.2 Unless otherwise advised, it is the responsibility of the vessel builder as the main contractor to ensure, in co-operation with the engine builders, that the information required by this section is prepared and submitted.

#### **4.2 Basic system requirements**

- 4.2.1 The systems are to be free from excessive torsional, axial and lateral vibrations, and are to be aligned in accordance with tolerances agreed with the respective manufacturers.
- 4.2.2 Where changes are subsequently made to a dynamic system which has been approved, revised calculations are to be submitted for consideration.

#### **4.3 Resilient mountings**

- 4.3.1 Where the machinery is installed on resilient mountings, liner vibrations (steady state and transient) is not to exceed the limiting values agreed with the manufacturers of the machinery nor those of the resilient mountings.
- 4.3.2 Misalignment arising from such vibration is not to impose excessive loading on machinery components within the system.

**4.4 Torsional vibration**

- 4.4.1 Torsional vibration calculations, including an analysis of the vibration torques and stresses for the dynamic systems formed by the oil engines, turbines, motors, generators, flexible couplings, gears, shafting and propellers, where applicable, including all branches, are to be submitted for approval together with the associated plans.
- 4.4.2 Particulars of the division of power developed throughout the speed range for turbines, or from all intended combinations of operation in oil engine installations having more than one engine and / or with power take-off systems are to be submitted.
- 4.4.3 Any special speed requirements for prolonged periods in service are to be indicated, e.g., range of trawling revolutions per minute, range of operation revolutions per minute with a controllable pitch propeller, idling speed, etc.
- 4.4.4 The calculation and / or measurements carried out on oil engine installations containing transmission items sensitive to vibratory torque, e.g. gearing, flexible couplings, or generator rotors and their drives are to take into account the effects of engine malfunction commonly experienced in service, such as cylinder (s) not firing.
- 4.4.5 Restricted speed ranges will be imposed in regions of speed where stresses are considered to be excessive for continuous running. Similar restrictions will be imposed, or other protective measures required to be taken, where vibratory torques are considered to be excessive for particular machinery items.
- 4.4.6 Where calculations indicate the possibility of excessive torsional vibration within the range of working speeds, torsional vibration measurements, using the appropriate recognized techniques, may be required to be taken from the machinery installation for the purpose of determining the need for restricted speed ranges.

**4.5 Axial vibrations**

- 4.5.1 For all main propulsion shafting systems, the ship builder are to ensure that amplitudes due to axial vibrations are satisfactory throughout the speed range, so far as practicable. Where appropriate, amplitudes may be reduced by the use of suitable vibrations dampers or phasing or propeller and engine, etc.
- 4.5.2 Unless previous experience of similar installation shows it to be unnecessary, calculations of the shafting systems are to be carried out. These calculations are to include the effect of the thrust block seating and the surrounding hull structure taking

part in the vibration. The result of these calculations or the evidence of previous experience is to be submitted for consideration.

- 4.5.3 Where calculations indicate the possibility of excessive axial vibration amplitudes within the range of working speeds, measurements using an appropriate recognized technique may be required to be taken from the shafting systems for the purpose of determining the need for restricted speed ranges.

#### **4.6 Lateral vibrations**

- 4.6.1 For all main propulsion shafting systems the ship builders are to ensure that amplitudes due to lateral vibrations are satisfactory throughout the speed range.
- 4.6.2 Unless previous experience of similar installations shows it to be unnecessary, calculations of lateral, or bending, vibration characteristics of the shafting system are to be carried out. These calculations, taking account of dynamic bearing stiffness, are to cover the frequencies giving rise to all critical speeds which may result in significant amplitudes within the speed range, and are to indicate relative deflections and bending moments throughout the shafting system.
- 4.6.3 The result of these calculations, or the evidence of previous experience, is to be submitted for consideration.
- 4.6.4 Where calculation indicate the possibility of excessive lateral vibration amplitudes within the range of working speeds, measurements using an appropriate recognized technique may be required to be taken from the shafting system for the purpose of determining the need for restricted speed ranges.

#### **4.7 Shaft alignment**

- 4.7.1 For main propulsion installations, the shafting is to be aligned to give acceptable bearing reactions, and bending moments at all conditions of vessel loading and operation. The ship builder is to position the bearings and construct the bearing seating to minimize the effects of movements under all operating conditions.
- 4.7.2 For geared installations, where two or more pinions are driving the final reduction wheel, calculations are to be submitted to verify that shaft alignment is such that proper bearing reactions are maintained under all operating conditions.
- 4.7.3 Shaft alignment is to be verified by measurement.

**End of Chapter**

**Chapter 5**  
**Boilers and Pressure Vessels**  
**Contents**

**Section**

1      General

**Section 1**

**General**

**1.1      Scope**

1.1.1    The requirements of this Chapter are applicable to pressure vessels of seam less and fusion welded construction and their mounting sand fittings, for the following uses:-

- a)      Fired boilers;
- b)      Exhaust gas heated boilers;
- c)      Economizers, super heaters, re-heaters and steam receivers for, and associated with (a) to (b).
- d)      Steam heated steam generators,
- e)      Other pressure vessels, not included in (a) to (d)

1.1.2    Consideration will be given to arrangements or details of boilers, pressure vessels and equipment which can be shown to comply with other recognized standards, provided they are not less effective.

**1.2      Design pressure**

1.2.1    The design pressure is the maximum permissible working pressure and is to be not less than the highest set pressure of any safety valve.

1.2.2    The calculations made to determine the scantlings of the pressure parts are to be based on the design pressure, adjusted where necessary to take account of pressure variations corresponding to the most severe operational conditions.

1.2.3    It is desirable that there should be a margin between the normal pressure at which the boiler or pressure vessel operates and the lowest pressure at which any safety valve is set to lift, to prevent unnecessary lifting of the safety valve.

**1.3      Metal temperature**

1.3.1    The metal temperature, T, used to evaluate the allowable stress is to be taken as the actual metal temperature expected under operating conditions for the pressure part

concerned and is to be stated by the manufacturer when plans of the pressure parts are submitted for consideration.

1.3.2 For boilers, the design metal temperature is not to be taken less than the following values, unless justified by an exact calculation of the temperature drop and is in no case to be taken less than 250° C:-

- a) For steam heated steam generators, secondary drums of double evaporation boilers, steam receivers and pressure part of fired pressure vessels not heated by hot gases and adequately protected by insulation, the metal temperature, T is to be taken as the maximum temperature of the internal fluid;
- b) For pressure parts heated by hot gases, T is to be taken as not less than 25° C in excess of the maximum temperature of the internal fluid;
- c) For combustion chambers of the type used in horizontal wet-back boilers, T is to be taken as not less than 50° C in excess of the maximum temperature of the internal fluid;
- d) For furnaces, fire boxes, rear-tube plates of dry-back boilers and pressure parts subject to similar rates of heat transfer, T is to be taken as not less than 90° C in excess of the maximum temperature of the internal fluid;
- d) For boiler, super-heater, re-heater and economizer tubes, the design temperature is to be taken as under:-
  - For boiler tubes the design temperature is to be taken as not less than saturated steam temperature plus 25° C for tubes mainly subject to convention heat, or plus 50° C for tubes mainly subjected to radiant heat;
  - For super-heater and re-heater tubes, the design temperature is to be taken as not less than steam temperature expected in the part being considered, plus 35° C for tubes mainly subject to radiant heat the design temperature is to be taken as not less than the steam temperature excepted in the part being considered, plus 50° C, but the actual metal temperature is to be stated when submitting plans;
  - The design temperature for economizer tubes is to be taken as not less than 35° C in excess of the maximum temperature of the internal fluid.

1.3.3 In general any parts of drums or headers not protected by tubes and exposed to radiation from fire or to the impact of hot gases is to be protected by a shield of good refractory material or by other approved means.

- 1.3.4 Drums and headers of thickness greater than 30 (mm) are not to be exposed to combustion gases having an anticipated temperature in excess of 650° C unless they are efficiently cooled by closed arranged tubes.

#### **1.4 Plans and particulars**

- 1.4.1 The following plans, in triplicate, for boiler and pressure vessels are to be submitted for approval, in so far as applicable:-

- a) General arrangement, including arrangement of valves and fittings;
- b) Sectional assembly;
- c) Seating arrangements;
- d) Steam, water drum and header details;
- e) Water wall details;
- f) Steam and super heater tubing, including the tube support arrangements;
- g) Economizer details;
- h) Casing arrangements;
- i) Reheat section;
- j) Fuel oil burning arrangement;
- k) Forced draft system;
- l) Boiler mountings including steam stop valves, safety valves and their relieving capacities, feed water connections, below-off arrangements water gauges, test cocks, etc.

- 1.4.2 The plans are to include the following particulars, in so far as applicable:-

- a) Scantlings;
- b) Materials;
- c) Weld details;
- d) Design pressures and temperatures;
- e) Heating surface areas of boilers and super-heaters;
- f) Estimated pressure drop through super heater;
- g) Estimated evaporation rate;
- h) Proposed setting pressure of safety valves on steam drum and super heater;
- i) Pressure-vessel class;
- j) Details of heat treatment and testing of welds;
- k) Calculations of thickness, when required;
- l) Test pressures.

### 1.5 Classification of pressure vessels

1.5.1 For rule purposes, boilers and pressure vessels are graded as shown in Table 1.5.1.

1.5.2 Pressure vessels which are constructed in accordance with the requirements of Class 2 or Class 3 will, if manufactured in accordance with the requirements of a superior class, be approved with the scantlings appropriate to that class.

| Table 1.5.1 : Grading to pressure vessels   |              |  |   |
|---|--------------|--|---|
|   | Boilers      | Steam-heated steam generators              | Other pressure vessels  |
| Class 1   | $p > 3.5$    | $D_1 > \left(\frac{15}{p} - 1\right) 1000$ | $P > 50$ or $t > 38$  |
| Class 2   | $p \leq 3.5$ | $D_1 > \left(\frac{15}{p} - 1\right) 1000$ | $P \leq 50$ or $D_1 > \frac{20}{p} - 1) 1000$ $16 < t \leq 38$ or material temperature $> 150^\circ \text{C}$ |
| Class 3   |              |  | $D_1 < \left(\frac{20}{p} - 1\right) 1000$ and $t \leq 16$ and material temperature $\leq 150^\circ \text{C}$ |
| Notes:-   |              |  |   |
| P = design pressure in bar $D_1$ = internal diameter (mm)    t = shell thickness (mm) |              |  |   |

1.5.3 In special circumstances relating to service conditions, materials, operating temperature, carriage of dangerous gases and liquids, etc. it may be required that certain pressure vessels be manufactured in accordance with the requirements of a superior class.

### 1.6 Materials

1.6.1 Materials used in the construction of boilers and pressure vessels are to be manufactured in accordance with the requirement of Pt. 2 Inspection and Testing of Materials of Rules & Rules for the Construction and Classification of Steel Vessels.

1.6.2 The specified minimum tensile strength of carbon and carbon manganese steel plates, pipes, forgings and castings is to be within the following general limits:-

- For seamless and Class 1 and Class 2 fusion welded pressure vessels – 340 – 520 (N/mm<sup>2</sup>);
- For boiler furnaces, combustion chambers and flanged plates – 400 – 520 (N/mm<sup>2</sup>)



- 1.6.3 The specified minimum tensile strength of low alloy steel plates, pipes, forgings and castings is to be within the general limits of 400-500 (N/mm<sup>2</sup>) and pressure vessels made in these steels are to be either seamless or Class 1 fusion welded.
- 1.6.4 The specified minimum tensile strength of boiler and super-heater tubes is to be within the following general limits;
- a) Carbon and carbon-manganese steels – 320 – 460 (N/mm<sup>2</sup>)
  - b) Low alloy steels – 400 – 500 (N/mm<sup>2</sup>)
- 1.6.5 Where it is proposed to use materials other than those specified in Pt.2, Inspection and Testing of Materials of Rules & Rules for the Construction and Classification of Steel Vessel, details of the chemical compositions heat treatment and mechanical properties are to be submitted for approval. In such cases the values of the mechanical properties used for deriving the allowable stress are to subject to agreement by classification society.
- 1.6.6 Where a fusion welded pressure vessel is to be made of alloy steel and approval of the scantlings is required on the basis of the high temperature properties of the material, particulars of the welding consumables to be used, including typical mechanical properties and chemical composition of the deposited weld metal are to be submitted for approval.

## **1.7 Pressure parts of irregular shape**

- 1.7.1 Where pressure parts are of such irregular shape that it is impracticable to design their scantlings by the application of formulae given in this Chapter, the suitability of their construction is to be determined by hydraulic proof test of a prototype or by an agreed alternative method.

## **1.8 Adverse working conditions**

- 1.8.1 Where working conditions are adverse, special consideration may be required to be given to increase the scantlings derived from formulae, e.g. by increasing the corrosion or other allowance at present shown in the formulae, or by adopting a design pressure higher than defined in 1.2, to offset the possible reduction of life in service caused by the adverse conditions. In this connection, where necessary, account should also be taken of any excess of loading resulting from:-
- a) Impact loads, including rapidly fluctuating pressures;
  - b) Weight of the vessel and normal contents under operating and test conditions;
  - c) Super imposed loads such as other pressure vessels, operating equipment's, insulation, corrosion resistant or erosion resistant linings and piping;

- d) Reaction of supporting lugs, rings, saddles or other types of supports;  
or
- e) The effect of temperature gradients on maximum stress.

### **1.9 Design**

- 1.9.1 The boilers and pressure vessels are to be designed in accordance with the requirements of Ch.5, Pt.4 Main and Auxiliary Machinery, of Rules & Rules for the Construction and Classification of Steel Vessels.

### **1.10 Manufacture**

- 1.10.1 The manufacture of boilers and pressure vessels is to be carried out in accordance with the requirements of Ch.10, Pt. 4 Main and Auxiliary Machinery of Rules & Rules for the Construction and Classification of Steel Vessels.

**End of Chapter**

## **Chapter 6**

### **Steering Gears**

#### **Contents**

#### **Section**

- 1 General
- 2 Design Criteria

#### **Section 1**

##### **General**

#### **1.1 General**

- 1.1.1 All vessels are to be provided with reliable steering systems which would allow the vessel to be steered safely having regard to the use and principal dimensions of the vessel. This requirement does not apply to vessels intended to be pushed only. Proposals to fit a hand tiller only will receive special consideration.
- 1.1.2 For vessels not fitted with rudder but equipped with steering propellers / nozzles or voith- schneider propellers, see 2.5. For vessels fitted with rudders, a steering gear is to be provided.
- 1.1.3 The steering gear is to be secured to the seating by fitted bolts, and suitable chocking arrangements are to be provided. The seating is to be of substantial construction.
- 1.1.4 The steering gear is to be so designed that the rudder cannot change position when not intended to do so.
- 1.1.5 Steering gears may be manually operated (steering chains and rods or hand / hydraulic) or fully powered (electric or electric / hydraulic). However, when the rule diameter of the rudder stock exceeds 150 (mm) in way of tiller, a fully powered steering gear is to be provided.
- 1.1.6 Manually operated gears or power assisted gears are only acceptable when the operation does not required an effort exceeding 16 (kgf) under normal conditions.
- 1.1.7 If a fully powered steering gear is fitted an independent secondary means of steering is to be provided.
- 1.1.8 Requirements for chemical tankers, gas carriers and similar vessels will be specially considered.

## **Section 2**

### **Design Criteria**

#### **2.1 General**

- 2.1.1 The entire steering gear is to be designed, constructed and installed to allow for a permanent transverse list of up to 15 and for ambient temperature commensurate with the area in which the vessel is to operate.
- 2.1.2 The parts comprising the steering gear are to be so dimensioned that they can withstand all the maximum stresses to which they will be subjected in normal operating conditions. The steering gear is to be sufficiently strong so that in the event of rudder touching the bottom or bank, the maximum damage would be limited to deforming or fracturing of the rudder stock.
- 2.1.3 The steering gear is to be so designed that a rudder angle of not less than 35 on-either side can be obtained.
- 2.1.4 Where the steering gear is manually operated, on an average one complete turn of the hand wheel is to correspond to at least 3 of rudder angle.
- 2.1.5 Where the steering gear is fully powered, it is to be capable of turning the rudder at an average rate of 4 per second through the entire rudder arc when the rudder is fully immersed and with the vessel at full speed.
- 2.1.6 Where fully powered steering gear is provided with a second, manually operated gear the latter is to permit the vessel to proceed to a mooring at reduced speed.

#### **2.2 Fully powered steering gear**

- 2.2.1 Fully powered steering gears may be the direct electric or electric / hydraulic type.
- 2.2.2 Powered steering gears are to be fitted with means to limit the torque exerted by the drive.
- 2.2.3 In case of failure of the main drive and the secondary drive not engaging automatically, it is to be possible to engage the secondary drive by hand at the steering position within 5 seconds with the rudder in any position.
- 2.2.4. At the steering station, automatic indication is to be provided as to which drive is in operation.
- 2.2.5 If the independent secondary drive is manual the power drive is not to actuate the hand wheel. A device is to be fitted to prevent inadvertent turning of the hand wheel when the manual drive is engaged automatically.

- 2.2.6 Where the main steering gear is power hydraulically operated whilst the secondary steering is a manually operated hydraulic system, the piping of both systems is to be complete separate, and the main installation is to operate without using the steering wheel pump of the secondary installation.
- 2.2.7 Where both the main and secondary drive are power hydraulic, the respective pumps must be driven independently.
- 2.2.8 Where the secondary pump is driven by an engine which does not operate continuously whilst the vessel is in motion, means are to be provided to operate the steering gear instantly whilst the emergency engine is gaining the required speed.
- 2.2.9 The two installations are to have separate pipes, valves, controls, etc. Where the independent functioning of the two installations is ensured, they may have common components.

### **2.3 Manual drive**

- 2.3.1 Where the sole steering installation is a manually operated system, an independent secondary steering system is not required, provided that in the case of a hydraulic system, the dimensioning, construction and layout of the piping precludes deterioration through mechanical action or fire, and the construction of the steering wheel pump ensures faultless operation.

### **2.4 Rudder position**

- 2.4.1 If the position of the rudder (s) is not clearly perceivable from the steering station, a reliable rudder angle indicator is to be provided at the steering station.
- 2.4.2 Any rudder angle indicator fitted, is to function for both the main and secondary steering gear.

### **2.5 Rudder propellers and Voith Schneider requirement**

- 2.5.1 Where a steering propeller / nozzle or Voith Schneider propeller is fitted, two independent control systems are to be provided between the steering station and the propulsion installation.
- 2.5.2 Where two or more independent steering propulsion installation are fitted, a secondary independent control system is not required provided the vessel remains sufficiently maneuverable in the event of one of the installations failing.

### **2.6 Tillers, quadrants and connecting rods**

- 2.6.1 For the requirements regarding udder, rudder stock. See Pt. 3, Ch. 12.
- 2.6.2 All components transmitting mechanical forces to the rudder stock are to have strength of at least equivalent to the rudder stock in way of the tiller. The combined

resultant stress,  $\sigma_e$  caused by the transmission of rudder torque  $Q_r$ , in tillers, vanes and other power transmitting components is not to exceed  $138 \text{ (N/mm}^2\text{)}$ , i.e.

$$\sigma_e \sqrt{\sigma^2 + 3\tau^2} \leq 138 * \frac{N}{mm} : +$$

Where,

$\sigma_e$  = The combined equivalent stress. (N/mm<sup>2</sup>)

$\sigma$  = The bending stress. (N/mm<sup>2</sup>)

$\tau$  = Torsional shear stress (N/mm<sup>2</sup>)

$Q_r$  = The rudder torque (N-m) calculated as per pt. 3 Ch. 12 Sec. 3.2:-

- 2.6.3 The section modulus 'Z' (cm<sup>3</sup>) and sectional area 'A' (cm<sup>2</sup>) of the tiller arms is not to be less than the following:-

$$Z \geq 0.012 Q_r \left( 1 - \frac{x}{R} \right) (cm^3)$$

$$A \geq 2.0 \frac{Q_r}{R} \times 10^{-4} (cm^2)$$

Where,

R = The distance (m) from the point of application of the effort on the tiller to the center of rudder stock; and

x = The distance (m) from the section under consideration to the center of the rudder stock.

- 2.6.4 The boss may be fitted on the rudder stock by shrinking with / without key or may be of the split type. The ratio between the mean of outer and inner diameters of the boss is to be not less than 1.75 and the height of the boss is not to be less than the inner diameter of the boss.
- 2.6.5 Co-efficient of friction for shrink fitting is not to be taken greater than 0.17 for dry fitting and 0.15 for oil injection fitting.
- 2.6.6 In case of split type boss, the total number of joining bolts is to be at least 4. The distance of the center of the bolts from the center of the rudder stock is generally to be  $1.15 d_u$  and the thickness of the coupling flange is to be at least 1.1 times the required bolt diameter. The thickness of shim to be fitted between two halves before machining is to be  $0.0015 d_u$ . The diameter of the coupling bolt  $d_b$  is to be not less than:-

$$d_b = \frac{d_u}{\sqrt{n}} (mm)$$

Where,

$d_u$  = The rudder stock diameter in way of the tiller calculated in accordance with Pt.3, Ch.12, Sec. 3;

$n$  = Total number of joining bolts.

2.6.7 The shear area of the key.  $A_s$ , is not to be less than:-

$$A_s = \frac{0.18Qr}{dm} \text{ (cm}^2\text{)}$$

Where,

$dm$  = diameter of the conical part of the rudder stock at midway of key, (mm)

The keyway is to extend over the full depth of the tiller and have rounded edges. The abutting surface area of the key,  $A_b$ , (discounted founded edges) between the key and the rudder stock or the key and the tiller boss is not to be less than:-

$$A_b \geq 0.5 A_s$$

2.6.8 Where higher tensile bolts are used on bolted tillers and quadrants, the yield and ultimate tensile stresses of the bolt material are to be stated on the plans submitted for approval, together with full details of the methods to be adopted to obtain the required setting-up stress. Where patent nuts or systems are used, the manufacturer's instructions for assembly should be adhered to.

2.6.9 In bow rudders having a vertical locking pin operated from the deck above, positive means are to be provided to ensure that the pin can be lowered only when the rudder is exactly central. In addition, an indicator is to be fitted at deck to show when the rudder is exactly central.

2.6.10 Steel-wire rope, chain and other mechanical systems, when these are used for rudder stock diameters of 120 (mm) and less but excluding allowance for strengthening in ice, will be specially considered. In general the breaking strength of rods / chains etc. is not to be less than:-

$$\text{Breaking strength} \geq 6 \frac{Qr}{R} \text{ (N)}$$

Where  $R$  is defined in 2.6.3.

## **2.7 Locking or break gear and springs**

2.7.1 An efficient locking or break arrangement is to be fitted to all gears to keep the rudder steady when necessary. In the case of hydraulic steering gears which are fitted with isolating valves on the body of the gear and duplicate power units, an additional mechanical brake need not be fitted.

2.7.2 In bow rudders having a vertical locking pin operated from the deck above, positive means are to be provided to ensure that the pin can be lowered only when the rudder is exactly central in addition, an indicator is to be fitted at the deck to show when the rudder is exactly central.

- 2.7.3 The steering gear, unless hydraulically powered, is to be protected by means of springs or buffers from damage by impact on the rudder.

**2.8 Rudder stops**

- 2.8.1 Suitable stopping arrangements are to be provided for the rudder. Cut-outs on the steering engine are to be arranged to operate at a similar angle of helm than those for the rudder.

**End of Chapter**



**Chapter 7**  
**Control Engineering Systems**  
**Contents**

**Section**

- 1 General Requirements
- 2 Essential Features for Control and Alarm Systems
- 3 Control and Supervision of Machinery

**Section 1**  
**General Requirements**

**1.1 General**

- 1.1.1 This chapter applies to all vessels and is in addition to other relevant chapters of the rules.
- 1.1.2 Attention should also be given to any relevant requirements of National, International or Local Authorities which would apply to the vessels in service.
- 1.1.3 This Chapter states requirements for systems of automatic or remote control which may be used for controlling the machinery contained in 1.2.2. The design and installation of other control equipment is to be such that there is no risk of danger due to failure.
- 1.1.4 The details of control systems will vary with the type of machinery being controlled and special consideration will be given to each case.

**1.2 Plans**

- 1.2.1 Where control systems are applied to essential machinery or equipment as listed in 1.2.2, plans are to be submitted in triplicate. They are to be included or to be accompanied by:-
  - Details of operating medium, i.e. pneumatic, hydraulic or electric, including stand by sources of power.
  - Description and / or block diagram showing method of operation.
  - Line diagrams of control circuits.
  - Lists of points monitored.
  - Lists of alarm points.
  - List of control points.

- Test facilities provided.
- Test schedules.

1.2.2 Control systems. Plans are required for the following:-

- Ballast systems.
- Bilge systems.
- Cargo pumping systems for tankers.
- Controllable pitch propellers.
- Electrical generating plant.
- Fire detection systems.
- Main propelling machinery including essential auxiliaries.
- Steam raising plant.
- Transverse thrust units.
- Steering gear plant.

1.2.3 Alarm systems. Details of the overall alarm system linking engine room, wheel house and, where applicable, accommodation spaces are to be submitted.

1.2.4 Control Station, Location – and details of control station are to be submitted, e.g. control panels.

1.2.5 Standard system. Where it is intended to employ a system which has been previously approved, plans may not be required to be submitted.

**1.3 Alarm and control equipment**

1.3.1 Major units of equipment associated with control, alarm and safety systems as defined in 1.2 are to be surveyed at the manufacturers' works and the inspection and testing is to be to the Surveyor's satisfaction.

1.3.2 Equipment used in control alarm systems should whenever practicable, be selected from the List of Type Approved Control and Electrical Equipment published by IRS. A copy of classification society (IRS) Test Requirements for the Type Approval of Control and Electrical Equipment will be furnished on application.

1.3.3 Assessment of performance parameters, such-as accuracy, repeatability and the like, are to be in accordance with an acceptable National or International Standard.

**1.4 Alterations or additions**

1.4.1 When an alteration or addition to the approved system (s) is proposed, plans are to be submitted for approval. The alternations, or additions are to be carried out under survey, and the inspection, testing and installation is to be to the Surveyor's satisfaction.

## **Section 2**

### **Essential Features for Control and Alarm Systems**

#### **2.1 General**

- 2.1.1 Where it is proposed to install control and alarm systems to the equipment defined in 1.2.2 the applicable features contained in 2.2 to 2.5 are to be incorporated in the system design.

#### **2.2 Control station(s) for machinery**

- 2.2.1 A system of alarm displays and controls are to be provided which readily ensure identification of faults in the machinery and satisfactory supervision of related equipment.

#### **2.3 Alarm systems**

- 2.3.1 Where an alarm system, which will provide warning of faults in the machinery and control systems is installed, the requirements of 2.3.1 to 2.3.10 are to be satisfied.
- 2.3.2 Machinery and control system faults are to be indicated at the relevant control station to advice duty personnel of a fault condition.
- 2.3.3 Individual alarm channels may be displayed as group alarms at the main control station (if fitted) or alternatively at subsidiary control stations.
- 2.3.4 All alarms are to be both audible and visual. If arrangements are made to silence audible alarms they are not to extinguish visual alarms.
- 2.3.5 If an alarm has been acknowledged and a second fault occurs before the first was rectified then audible and visual alarms are again tope rate.
- 2.3.6 Failure of the power supply to the alarm system is to be indicated.
- 2.3.7 The alarm system should be designed with self-monitoring properties. As far as practical, any fault in the alarm system should cause it to fail to the alarm condition.
- 2.3.8 The alarm system is to be designed as far as practical to function independently of control systems, such that a failure or malfunction in these systems will not prevent the alarm from operating.
- 2.3.9 Disconnection or manual over riding of any part of the alarm system should be clearly indicated.
- 2.3.10 The alarm system is to be capable of being tested.

#### **2.4 Control Systems**

- 2.4.1 Control systems for machinery operations are to best able throughout their operating range.

- 2.4.2 Failure of the power supply to a control system for propulsion machinery and associated systems is to be operate an audible and visual alarm.
- 2.4.3 When remote or automatic controls are provided, sufficient instrumentation is to be fitted at the relevant control stations to ensure effective control and indicate that the system is functioning correctly.
- 2.4.4 Where valves are operated by remote or automatic control, the system of control should include the following safety features:-
- a) Failure of actuator power should not permit a closed valve to opening advertently.
  - b) Positive indication is to be provided at the remote control station for the service to show the actual valve position or alternatively that the valve is fully opened or closed. Valve position indicating systems are to be of an approved type.
  - c) Equipment located in places which may be flooded should be capable of operating when submerged.
  - d) A secondary means of operating the valves, which may be local manual control is to be provided.

## **2.5 Fire detection alarms systems**

- 2.5.1 Where an automatic fire detection system is to be fitted in a machinery space the requirements of 2.5.2 to 2.5.9 are to be satisfied.
- 2.5.2 A fire detector indicator panel is to be located in such a position that a fire in the machinery spaces will not render it in operative.
- 2.5.3 The audible fire alarm is to have a characteristic tone which distinguishes it from any other alarm system. The audible fire alarm is to be audible on all parts of the bridge and in the accommodation areas.
- 2.5.4 The alarm system should, so far as practicable, be designed with self-monitoring properties.
- 2.5.5 Failure of power supply to the alarm system is to be indicated.
- 2.5.6 Detector heads of an approved type are to be located in the machinery spaces so that all potential fire out break points are guarded.
- 2.5.7 The fire detection system is to be capable of being tested.
- 2.5.8 It is to be demonstrated to the Surveyor's satisfaction that detector heads are so located that air currents will not render the system ineffective.
- 2.5.9 A drawing showing the location of the fire detector heads and the fire indicator panel, is to be submitted.

### Section 3

#### Control and Supervision of Machinery

##### 3.1 General

- 3.1.1 When machinery, as defined in 1.2.2, is fitted with automatic or remote controls so that under normal operating conditions it does not require any manual intervention by the operators then it is to be provided with the arrangements specified in 3.2 to 3.7. Alternative arrangements which provide equivalent safe guards will be considered.

##### 3.2 Oil engines for propulsion purposes

- 3.2.1 The following systems are to be provided with alarms:-

| System  | Alarm                       |
|---|-----------------------------|
| Lubricating oil pressure for the engine including gearing | Low                         |
| Lubricating oil pressure for the engine including         | Failure, see 3.2.2          |
| Cooling system (s) Temperature                            | High                        |
| Cooling system (s) Temperature                            | Excessively high, see 3.2.3 |

- 3.2.2 In the case of the lubricating oil system, in addition to the alarm indication as required by 3.2.1 at complete loss of lubricating oil the engine is to be stopped automatically or alternatively a second and separate alarm is to be provided giving audible and visible warning in the wheelhouse and in the engine room. The circuit and sensor employed for this automatic stop or alarm are to be additional to the alarm circuit and sensor required by 3.2.1
- 3.2.3 In the case of cooling system(s), in addition to the alarm indication as required by 3.2.1 a shutdown system for excessively high temperature may be fitted, which is to be independent of the alarm system.
- 3.2.4 Prolonged running in a restricted speed range is to be prevented automatically, alternatively, indication of restricted speed ranges is to be provided at each control station.

##### 3.3 Boilers

- 3.3.1 A system of water level detection is to be fitted which will operate alarms and shut off automatically the oil supply to the burners when the water level fall to a predetermined to level.

3.3.3 The oil fuel is to be shut off automatically from the burners, and alarms are to operate on flame failure and failure of combustion air supply detected by either low pressure at the fan-outlet or stopping of the fan motor.

3.3.3 Where the burner flame(s) is / are extinguished and reignited automatically in response to steam demand then after total flame failure re-ignition shall not take place until the furnace has been purged of explosive gases.

### 3.4 Auxiliary engines

3.4.1 The following systems for auxiliary engines of more than 37 kW (50 shp) are to be provided with alarms:-

| System  | Alarm  |
|---|--------|
| Lubricating oil pressure  | Low *  |
| Cooling system temperature  | High * |
| * These alarms may be combined with an automatic shutdown system, if fitted |        |

### 3.5 Remote control for propulsion machinery

3.5.1 The following systems are to be provided with alarms:-

| System  | Alarm          |
|---|----------------|
| Operating – medium for hydraulic or pneumatic coupling in propulsion system       | Low pressure   |
| Operating medium for hydraulic or pneumatic remote control system for main engine | Low pressure   |
| Electrical supply to remote control system for main engine                        | Loss of supply |

### 3.6 Controllable pitch propellers and transverse thrust units

3.6.1 Preferred alarm and safeguard are indicated in 3.6.2 to 3.6.4.

3.6.2 In the case of main propulsion systems, means are to be provided to prevent the engines and shafting being subjected to excessive torque due to changes in propeller pitch alternatively an engine overload indicator may be fitted at each station for which it is possible to control the pitch of the propeller.

3.6.3 Where transverse thrust units are remotely controlled, means are to be provided at the remote control station to stop the propulsion unit.

3.6.4 The following systems are to be provided with alarms:-

| System  | Alarm         |
|---|---------------|
| Hydraulic system pressure   | Low           |
| Power supply to the control system between the remote control station and hydraulic actuator. | Low of supply |

### 3.7 Steering gear

- 3.7.1 For power operated steering gear, safeguards and alarms are to be provided as indicated in 3.7.2 and 3.7.5.
- 3.7.2 Provision should be made at the bridge to ensure that the steering gear may be rapidly and effectively transferred to an alternative power and control system, which may be manual.
- 3.7.3 Where the alternative steering gear system is also power operated this system should be independent of the main power system.
- 3.7.4 The control system for the alternative steering gear system required by 3.7.2 is to be independent of the main steering gear control system.
- 3.7.5 The following systems are to be provided with alarms:-

| System                                 | Alarm   |
|--|---------|
| Steering gear power system (s)         | Failure |
| Steering gear control system (s)       | Failure |
| Steering gear hydraulic oil tank level | Low     |

### 3.8 Main propulsion shafting

- 3.8.1 Where a tank supplying lubricating oil to the stern bush is fitted, it is to be located above the load waterline and is to be provided with a low level alarm.

**End of Chapter**

**Chapter 8**  
**Spare Gear**  
**Contents**

**Section**

1 General

**Section 1**  
**General**

**1.1 General**

- 1.1.1 Adequate spare parts for the propelling and essential auxiliary machinery together with necessary tools for maintenance and repair are to be readily available for use.
- 1.1.2 Spare parts are to be supplied and their location is to be the responsibility of the Owner but must take in to account the design and arrangements of the machinery and the intended service and operation of the vessel. Account should also be taken of the recommendations of the machinery manufacturer and any applicable statutory requirements of the country of registration of the vessel.

**1.2 Table of spare parts**

- 1.2.1 For guidance purposes spare parts for main and auxiliary machinery installations are shown in the following Tables:-
- Table 1.2.1 – Spare parts for main internal combustion engines;
  - Table 1.2.2 – Spare – parts for auxiliary boilers;
  - Table 1.2.3 – Spare parts for auxiliary air compressors.

| <b>Table 1.2.1 – Main internal combustion engines</b> |                   |  |             |
|---|-------------------|--|-------------|
| <b>Sr. No.</b>  | <b>Item</b>       | <b>Spare Part</b>  | <b>Qty.</b> |
| 1.  | Main thrust block | Pads for one face of thrust block  | 1 set       |
|   |                   | Complete white metal thrust shoe of solid ring type  | 1           |
|   |                   | Inner and outer race with rollers, where roller thrust bearings are fitted                 | 1           |
| 2   | Cylinder valves   | Exhaust valves, complete with casings, seats, springs, and other fittings for one cylinder | 1 set       |



|   |  |   |         |
|---|--|---|---------|
|   |  | Air inlet valves, complete with casings, seats springs and other fittings for one cylinder                      | 1 set   |
|   |  | Starting air valve, complete with casing, seat, springs and other fittings                                      | 1       |
|   |  | Relief valve, complete  | 1       |
|   |  | Fuel valves of each size and type fitted complete with all fittings, for one engine                             | 1/4 set |
| 3 |  | Special gaskets and packing of each size and type fitted for cylinder cover and cylinder liner for one cylinder | 1 set   |

**Table 1.2.2 – Auxiliary boilers**

| <b>Sr. No.</b> | <b>Item</b>            | <b>Spare Part</b>  | <b>Qty.</b> |
|----------------|------------------------|--|-------------|
| 1              | Tube stoppers or plugs | Tube stoppers or plugs, of each size used for boiler super heater and economizer tubes | 10          |
| 2              | Fire bars              | Fire bars for one boiler, where coal fired   | Half set    |
| 3              | Oil fuel burners       | Oil fuel burners complete, for one boiler  | 1 set       |

**Table 1.2.3 – Auxiliary air compressor**

| <b>Sr. No.</b> | <b>Item</b>  | <b>Spare Part</b>   | <b>Qty.</b> |
|----------------|--------------|---|-------------|
| 1              | Piston rings | Rings of each size fitted for one piston                    | 1 set       |
| 2              | Valves       | Suction and delivery valves, complete, of each size fitted. | Half set    |

**End of Chapter**

# **PART D**

## **ELECTRICAL**

### **INSTALLATIONS**

Electrical Installations requirements and any other related rules for vessels operating in Inland Waters to be applicable as per IRS and / or any IACS Classification Society Rules and / or IWAI model rules as applicable may be accepted for Inland Vessels.

## **Electrical Installations – Equipment's and Systems**

### **Contents**

#### **Section**

1. General Requirements
2. System Design
3. Switch board
4. Cables
5. Control Gear
6. Rotating Machines – Construction and Testing
7. Transformers – Construction and Testing
8. Miscellaneous Equipment
9. Trials

### **Section 1**

#### **General Information**

#### **1.1 General**

- 1.1.1 The requirements of this Chapter apply to self-propelled and non-self-propelled vessels for service on inland waterways unless otherwise stated. Attention should also be given to any relevant applicable requirements of National or Local Authorities.
- 1.1.2 In passenger vessels, services essential for safety are to be maintained under emergency conditions and the safety of vessel and personnel from electrical hazards is to be assured.
- 1.1.3 Electrical installations are to be constructed and installed in accordance with the relevant sections of this Chapter and are to be inspected and tested-by the Surveyors. Compliance with the requirements of an acceptable National or International Standards may be accepted as meeting the requirements of this Chapter, subject-to inspection and testing by the Surveyors.
- 1.1.4 Classification society will be prepared to give consideration to special cases or to arrangements which are equivalent to the Rules. Consideration will also be given to the electrical arrangements of small vessels and vessels to be assigned class notation for a specified-limited service.

#### **1.2 Plans**

- 1.2.1 The plans and particulars in 1.2.2 to 1.2.4 are to be submitted in triplicate for approval.

- 1.2.2 Electrical Equipment:- The arrangement plan and circuit diagram of the switchboard(s). Diagrams of the wiring system including cable sizes, type of insulation, normal working current in the circuits and the capacity, type and make of protective devices. Calculations of short circuit currents at main bus bars and the secondary side of transformers are to be submitted.
- 1.2.3 Oil tankers, and similar vessels:- A general arrangement of the vessel showing hazardous zones or spaces and the location of electrical equipment in such zones or spaces. A schedule of safe type electrical equipment located in 'hazardous zones or spaces giving details of the type of equipment fitted, the Certifying Authority, the certificate number and copies of the certificate.
- 1.2.4 Centralized, remote or automatic controls:- See Ch. 7.

### **1.3 Additions or alterations**

- 1.3.1 Additions or alterations, (temporary or permanent) to the approved load of an existing installation are not to be made until it has been ascertained that the current carrying capacity and the condition of the existing accessories, conductors and switch gear are adequate for the proposed modification.
- 1.3.2 Plans for the proposed modifications are to be submitted for approval and the alternations or additions are to be carried out under the inspection, and to the satisfaction of the Surveyors.

### **1.4 Application**

- 1.4.1 Except where a specific statement is made to the contrary, all requirements of this Chapter are applicable to both alternating current and direct current installations.
- 1.4.2 Direct current equipment is to operate satisfactorily under voltage fluctuations of plus 6 percent and minus 10 percent.
- 1.4.3 Alternating current equipment is to operate satisfactorily under voltage fluctuations of plus 6 percent and minus 10 percent at rated frequency, and under fluctuations of  $\pm 5$  percent per at rated voltage.
- 1.4.4 Contactors and similar electromagnetic equipments are not to drop out at or above 85 percent rated voltage.
- 1.4.5 For D. C. installations supplied by batteries, consideration is to be given to the supply voltage variations between the battery's full charged and minimum charged voltages. For installations with float charging, the maximum charging voltage is also to be considered.

**1.5 Ambient reference conditions**

- 1.5.1 The rating of electrical equipment is to be suitable for the temperature conditions associated with geographical limits of the intended service. See also Ch.1.

**1.6 Location and construction**

- 1.6.1 Electrical equipment is to be placed in accessible and adequately lighted spaces clear of flammable material and heat sources. The spaces should be well ventilated, and the equipment should not be exposed to risk of mechanical injury or damage from water, excessive moisture, steam, oil or any other dangerous fluid. Where necessarily exposed to such hazards, the equipment is to be suitably – constructed or enclosed.
- 1.6.2 Live parts are to be efficiently shielded from any accidental contact.
- 1.6.3 All electrical apparatus and equipment is to be constructed and installed so as to avoid injury or electrical shock when handled or touched in the course of normal operation.
- 1.6.4 All nuts and bolts / screws used to connect or secure current – carrying parts and working parts are to be effectively locked, to prevent them from working loose during operation.

**1.7 Earthing**

- 1.7.1 All non-current-carrying exposed metal parts of electrical machines or equipment are to be effectively earthed.
- 1.7.2 All accessible non-current-carrying metal parts of portable electrical apparatus rated in excess of 55 volts are to be earthed through a suitable conductor unless equivalent safety provisions are made such as by double insulation or by an isolating transformer.
- 1.7.3 In general earthing connections are to be equal to the cross section of the current-carrying conductor up to 16 (mm<sup>2</sup>). Above this figure they are to be equal to at least half the cross section of the current carrying conductor, with a minimum of 16 (mm<sup>2</sup>). Earthing connections which are not made of copper are to have conductance not less than that specified for a copper earthing connection. These are to be securely installed and protected where necessary against mechanical damage and electrolytic corrosion. These are to be made in an accessible location and secured at both ends by corrosion resistant screws or clamps with cross section corresponding to the earth conductor. Such screw or clamps are not to be used for other purposes. Suitable washers and conductor terminals are to be used so that a reliable contact is ensured.
- 1.7.4 The metallic sheaths of cables other than the measuring circuits are to be earthed at their two ends.

**1.8 Creepage and clearance**

- 1.8.1 Distance between live parts and between live parts and earthed metal, whether across surface or in air, are to be adequate for the working voltages considering the nature of the insulating material and the transient over voltages developed by switch and fault conditions.

**1.9 Electrical equipment for use in explosive gas atmospheres**

- 1.9.1 Where the rules require electrical equipment to be a "safe type", such equipment is to be certified for the gas / vapor involved. The equipment should conform to IEC publication 79, "Electrical Apparatus for Explosive Gas Atmosphere" or an equivalent national standard.
- 1.9.2 Copies of type test certificate by a competent independent Testing Authority are to be made available.
- 1.9.3 When "safe type" equipment is permitted in hazardous zones or spaces all switches and protective devices are to interrupt all lines or phases and, where practicable, are to be located in a non-hazardous zone or space unless specially permitted otherwise. Appropriate labels of non-flammable material are to be permanently affixed to such equipment, switches and protective devices for identification purposes.

**Section 2****System Design****2.1 Design****2.1.1 Supply and distribution systems**

- 2.1.1.1 The following systems of generation and distribution are acceptable for parallel systems at constant voltage:-

- a) d. c. two wire insulated.
- b) a. c. single – phase two – wire insulated.
- c) a. c. three – phase, three – wire insulated.
- d) a. c. three – phase, four – wire with neutral earthed but without hull return.

- 2.1.1.2 System of generation and distribution, other than those specified above, will, upon application by given special consideration.

**2.1.2 Earth indication**

- 2.1.2.1 Every insulated distribution system is to be provided with lamps or other means to indicate the state of insulation from earth. Where lamp indicators are used, the lamps are to be of the metal filament type and their power is not to exceed 30 watts.

**2.1.3 Number and rating of generating sets**

2.1.3.1 The number and rating of service generating sets are to be adequate to ensure the operation of services essential for the propulsion and safety of the vessel.

2.1.3.2 On oil tankers and similar vessels, where electrical power is required for essential equipment, the generating plant and converting plant is to be of such capacity that this essential equipment can be operated satisfactorily even with one generating set or converting set out of action.

**2.1.4 The emergency source of power in passenger vessels**

2.1.4.1 All passenger vessels are to be provided with an, emergency source of electrical power. On vessels having a rule length of 25 (m) or more, the emergency source is to be situated outside the engine room and the space is to be constructed of water tight and fire resisting bulk heads and decks.

2.1.4.2 Where emergency generating sets are fitted they are to be capable of being started readily when cold.

2.1.4.3 If hand starting is demonstrated to be practicable, alternative means of starting are not required. Where hand starting is not practicable, other means are to be provided and, in general, should provide for at least 12 starts in a period of thirty minutes without recourse to sources within the machinery space.

2.1.4.4 The emergency source of power is to be either:-

- a) A generator driven by a suitable prime mover with an independent fuel supply and with satisfactory starting arrangements; the fuel used is to have a flash point of not less than 43° C or
- b) An accumulator (storage) battery capable of carrying the emergency load without recharging or excessive voltage drop.

2.1.4.5 An indicator is to be mounted in the machinery space, or in the wheel house, to indicate when any accumulator battery fitted in accordance with 2.1.4.4 is being discharged.

2.1.4.6 The emergency switchboard is to be installed as near as is practicable to the emergency source of power.

2.1.4.7 The emergency switchboard may be supplied from the main switch board during normal operation.

2.1.4.8 The power available is to be sufficient to supply all services necessary for the safety of passengers and crew in an emergency, due regard being paid to such services as may have to be operated simultaneously. Special consideration is to be given to

emergency lighting in all alleyways, stairways and exits, in the machinery spaces and in the control stations where radio, main navigating or central fire recording equipment or the emergency generator is located, to fire detection and alarm system, to the emergency fire pump if electrical driven, automatic sprinkler systems if fitted, and toe navigation lights. The power is to be adequate for a period of at least 3 hours.

### **2.1.5 Essential services**

2.1.5.1 Where essential services are duplicated, they are to be served by individual circuits separated throughout their length as widely as is practicable and without the use of common feeders, protective devices or control circuits.

### **2.1.6 Diversity factor**

2.1.6.1 Circuits supplying two or more final sub-circuits are to be rated, in accordance with the total connected load subject, where justified, to the application of a diversity factor. Where spare ways (feeders) are provided on a section or distribution board, an allowance for future increase of load is to be added to the total connected load before application of any diversity factor.

2.1.6.2 The diversity factor may be applied when calculating cable size and when calculating the rating of switch gear and fuse gear.

2.1.6.3 The diversity factors are not applicable to supply cables to distribution switch boards for lighting and heating.

### **2.1.7 Lighting circuits**

2.1.7.1 Lighting circuits are to be supplied by final sub-circuits, which are separate from those for heating and power. This provision need not be applied to cab in fan sands mall wardrobe heaters.

2.1.7.2 A final sub-circuit of rating exceeding 15 am per sis not to supply more than one point.

2.1.7.3 A final sub-circuit of rating 15 amperes or less is not to supply more than the following number of lighting points:-

10 for 24-55 V circuits

14 for 110-127 V circuits

18 for 220-250 V circuits

This provision is not applicable to final sub-circuits for cornice lighting, panel lighting and electric signs where lamp holders are closely grouped, in such cases, the number of points is unrestricted provided the maximum operating current in the sub-circuit does not exceed 10 amperes.



2.1.7.4 Lighting of unattended spaces, such as cargo spaces is to be controlled by multi-pole linked switches located outside such spaces. Provision is to be made for the complete isolation of these circuits and locking in the "OFF" position of the means of control.

2.7.5 Emergency lighting is to be fitted in accordance with 2.1.4

### **2.1.8 Motor circuits**

2.1.8.1 A separate final sub-circuit is to be provided for every motor required for essential services and for every motor 1 (kW) or more.

### **2.1.9 Motor control**

2.1.9.1 Every electric motor is to be provided with an efficient means of starting and stopping so placed as to be easily accessible to be person controlling the motor.

2.1.9.2 Every motor required for essential services and for every motor of 0.5 (kW) or more is to be provided with the control apparatus as mentioned in 2.1.9.4 to 2.1.9.8.

2.1.9.3 When motor control gear is being selected, the maximum current of the motor is to be taken as its rated full load current.

2.1.9.4 Efficient means of isolation are to be provided so that all voltage may be cut off from the motor and any associated apparatus including any automatic circuit breaker.

2.1.9.5 Where the primary means of isolation (viz. that provided at the switchboard, section board or distribution fuse board) is remote from a motor, one of the following provision is to be made:-

- a) An additional means of isolation fitted adjacent to the motor; or
- b) Provision made for locking the primary means of isolation in the OFF position; or
- c) Provision made so that the fuses in each line can be readily removed and retained by authorized personnel.

2.1.9.6 Means to prevent the undesired restarting after a stoppage due to low volts or complete loss of volts are to be provided. This does not apply to motors where a dangerous condition might result from the failure to restart automatically e.g. steering gear motor. It is, however, to be ensured that the total starting current of motors having automatic re-start will not cause excessive voltage drop or over current on the installation.

2.1.9.7 Means for automatic disconnection of the supply in the event of excessive current due to mechanical over loading of the motor are to be provided. This does not apply to steering gear motors).

2.1.9.8 Where fuses are installed to protect poly phase motor circuits, means are to be provided to protect the motor against unacceptable overload in the case of single phasing.

#### **2.1.10 Remote stops for ventilation fans and pumps**

2.1.10.1 Ventilation fans for machinery and cargo spaces are to be provided with means for stopping them from easily accessible control stations located outside such spaces.

2.1.10.2 Motors driving forced and induced draught fans, independently driven pumps delivering oil to main propulsion machinery, for bearing lubrication and piston cooling, oil fuel transfer pumps, oil fuel unit pumps and other similar fuel pumps, fuel and lubricating oil purifiers and their attached pumps are to be fitted with remote controls situated outside the space concerned so that the electrical supply thereto can be disconnected in the event of fire arising in the space in which they are located.

2.1.10.3 In passenger vessels all power ventilation systems; except cargo and machinery space ventilation, which is to be in accordance with 2.1.10.1, are to be fitted with master controls so that all fans may be stopped from either of two separate positions which are to be situated as far apart as practicable.

#### **2.1.11 Steering gear**

2.1.11.1 Where electrical control of the steering system is fitted, an independent alternative control system is to be installed. This may be a duplicate electrical control system or control by other means.

2.1.11.2 Provision is to be made on the bridge to transfer the steering control instantaneously to the alternative means of control.

2.1.11.3 Indicators for running indication of steering gear motors are to be installed on the bridge.

2.1.11.4 Audible and visual alarms are to operate at the steering positions for failure of steering gear power system and failure of steering gear control system.

#### **2.1.12 Fire detection, alarm and extinguishing system on passenger vessels.**

2.1.12.1 Where electrically driven emergency fire pumps are installed in accordance with Ch. 9 the supply of such pumps is not to pass through the main machinery space.

2.1.12.2 Any fire alarm system is to operate both audible and visual signals at the fire detection control station (s).

#### **2.1.13 Navigation lights**

2.1.13.1 Each navigation light is to be controlled and protected in each insulated pole by a switch and fuse or circuit breaker mounted in the distribution board.

2.1.13.2 Automatic indication of failure is to be provided unless the lights are visible from the bridge.

2.1.13.3 Any statutory requirements of the country of registration are to be complied with and may be accepted as an alternative to the above.

#### **2.1.14 Size of batteries and charging facilities**

2.1.14.1 Where batteries are used for starting main engines, they are to be of adequate capacity to meet the requirements of Ch. 4.

2.1.14.2 Adequate charging facilities are to be provided, and where batteries are charged from line voltage by means of a series resistor, protection against reversal of current is to be provided when the charging voltage is 20 percent of line voltage or higher. Means are also to be provided to isolate the batteries from the low voltage system when being charged from a higher voltage system.

#### **2.1.15 Heating and cooking equipment**

2.1.15.1 Every heating or cooking appliance is to be controlled as a complete unit by a multi-pole linked switch mounted in the vicinity of the appliance.

2.1.15.2 In the case of small heaters, for individual cabins or similar small dry accommodation spaces where the floor coverings, bulkheads and ceiling linings are of insulating materials, a single pole switch is acceptable.

2.1.15.3 Heating, arrangements of the exposed element type are not to be used in any location.

#### **2.1.16 Temporary external supply / shore connection**

2.1.16.1 Where arrangements are provided for the supply of electric power from a source on shore or elsewhere, a connection box is to be installed in an easily accessible location in a manner suitable for the convenient reception of flexible cables from the external source. This box should contain a circuit-breaker or isolating switch and fuses and terminals of ample size and suitable shape to facilitate a satisfactory connection. The mechanical stress of the portable cable is to be conveyed directly to the metallic framework and not to electrical connectors. Suitable cables, permanently fixed are to be provided, connected the circuit breaker / isolating switch in the connection box to a linked switch and / or circuit breaker at the main switch board.

2.1.16.2 For alternating current systems an earthed terminal is to be provided for the reception of three-phase external supplies with earthed neutrals.

2.1.16.3 The external connection is to be provided with an indicator at the main switchboard in order to show when the cable is energized.

2.1.16.4 Means are to be provided for checking the polarity (for direct current) or the phase sequence (for three-phase alternating current) of the incoming supply. This device should be connected between the incoming connectors and the interrupting device in the connection box.

2.1.16.5 A notice is to be provided at the connection box giving complete information on the system of supply and the normal voltage (and frequency for alternating current) of the vessel installed system. Full details of the procedure for effecting the connection are to be given on this notice.

2.1.16.6 Alternate arrangements for providing a temporary external supply will be specially considered.

## **2.2 Protection**

### **2.2.1 General**

2.2.1.1 Installations are to be protected against accidental over-currents including short circuits. The choice, location and characteristics of the protective device are to provide complete and coordinated protection to ensure:-

- a) Elimination of the fault to reduce damage to the system and hazard of fire.
- b) Continuity of service so as to maintain, through the discriminative action of the protective devices, the supply to circuits not directly affected by the fault.

### **2.2.2 Protection against overload**

2.2.2.1 Protection against overloads may be provided by circuit-breakers, automatic switches or fuses. The tripping characteristics of these devices are to be appropriate to the system. Fuses rated above 320 amperes are not to be used for protection against overload, but may be used for short-circuit protection.

### **2.2.3 Protection against short-circuit**

2.2.3.1 Protection against short-circuit currents is to be provided by circuit-breakers or fuses.

2.2.3.2 The breaking capacity of every protective device is to be not less than the maximum value of the short-circuit current which can flow at the point of installation at the instant of contact separation.

2.2.3.3 The making capacity of every circuit-breaker or switch intended to be capable of being closed, if necessary, on short circuit, is to be not less than the maximum value of the short-circuit current at the point of installation. On alternating current this maximum value corresponds to the peak value allowing for maximum asymmetry.

2.2.3.4 Every protective device or contactor not intended for short circuit interruption is to be adequate for the maximum short-circuit current which can occur at the point of installation having regard to the time required for the short circuit to be removed.

2.2.3.5 In the absence of precise data of rotating machine the following short-circuit current at the machines terminals are to be assumed. The short circuit is to be the sum of short circuit currents of generators and that of motors;

a) Direct current systems

Ten times full load current for generators normally connected (including spare).

Six times full load current for motors simultaneously in service;

b) Alternating current systems

Ten times full load current for generators normally connected (including spare) – symmetrical RMS.

Three times full load current for motors simultaneously in service.

## **2.2.4 Combined circuit-breakers and fuses**

2.2.4.1 The use of a circuit-breaker of breaking capacity less than the prospective short-circuit current at the point of installation is permitted, provided that it is preceded on the generator side by fuses, or by a circuit-breaker having at least the necessary breaking capacity. The generator breakers are not to be used for this purpose.

2.2.4.2 Fused circuit-breakers with fuses connected to the side may be used where operation of the circuit-breaker and fuses is coordinated.

2.2.4.3 The characteristics of the arrangement are to be such that:-

- a) When the short-circuit current is broken, the circuit-breaker on the load side is not to be damaged and is to be capable further service,
- b) When the circuit-breaker is closed on the short-circuit current, the remainder of the installation is not to be damaged. However, it is admissible that the circuit-breaker on the load side may require servicing after the fault has been cleared.

## **2.2.5 Protection of circuits**

2.2.5.1 Short circuit protection is to be provided in each live pole of direct current system and in each phase of an alternating current system.

2.2.5.2 Protection against overloads is to be provided as follows:-

- a) Two – wire direct current or single – phase alternating current system – at least one line or phase.
- b) Insulated three – phase alternating current system at least two phases.
- c) Earthed three – phase alternating current system – all three phases.

2.2.5.3 No fuse, non-linked switch or non-linked circuit – breaker is to be inserted in an earthed conductor. Any switch or circuit-breaker fitted is to operate simultaneously in the earthed conductor and the insulated conductors.

2.2.5.4 These requirements do not preclude the provision (for test purpose) of an isolated link to be used only when the other conductors are isolated.

### **2.2.6 Protection of generators**

2.2.6.1 In addition to over-current protection, the provisions of 2.2.6.2 to 2.2.6.7 are to be adhered to as a minimum.

2.2.6.2 For generators not arranged to run in parallel a multi-pole circuit – breaker arranged to open simultaneously all insulated poles or in the case of generators rated at less than 50 (kW) a multi-pole linked switch with a fuse in each insulated pole on the generator side is to be provided. The fuse rating in such cases is to be maximum 125 percent of the generator rated current.

2.2.6.3 For generators arranged to run in parallel a circuit – breaker arranged to open simultaneously all insulated poles is to be provided. This circuit – breaker is to be provided with:-

- a) For direct current generators, instantaneous reverse-current protection operating at not more than 15 percent rated current,
- b) For alternating current generators:-
  - i) A reverse – power protection with time delay selected and set within the limits of 2 percent to 15 percent of full load to a value fixed in accordance with characteristics of prime movers.
  - ii) Advice for protection against the effects of parallel connection in opposite phase.

2.2.6.4 The reverse-current protection is to be adequate to deal with the reverse-current conditions emanating from the network, e.g. from winches. The reverse-power protection specified for alternating current generator may be replaced by other devices ensuring adequate protection of the prime movers.

2.2.6.5 Generator circuit-breakers are normally to be provided with under voltage release.

### **2.2.7 Protection of feeder circuits**

2.2.7.1 Isolation and protection of each main distribution circuit is to be ensured by a multi-pole circuit-breaker or multi-pole switch and fuses. The provisions of 2.2.2, 2.2.3 and 2.2.5 are to be complied with. The protective devices are to allow excessive current to pass during the normal accelerating period of motors. Where multi-pole switch and

fuses are used, the fuses are generally to be installed between the bus bars and the switch.

2.2.7.2 Circuits which supply motors fitted with overload protection may be provided with short-circuit protection only.

2.2.7.3 Motors of rating exceeding 0.5 (kW) are to be protected individually against overload and short-circuit. The short-circuit protection can be provided by the same protective device for the motor and its supply cable. The overload protection may be replaced by an overload alarm, if desired by the Owner.

## **2.2.8 Protection of power transformers**

2.2.8.1 The primary circuits of power transformers are to be protected against short-circuit by circuit-breakers or fuses. The rating of fuses of the setting for over current releases of circuit breakers is not to exceed 125 percent of rated primary current. Switched and circuit-breakers are to be capable of withstanding surge currents.

2.2.8.2 When transformers are arranged to operate in parallel means are to be provided for isolation of the secondary circuits. Switches and circuit-breakers are to be capable of withstanding surge currents.

## **2.2.9 Protection of lighting circuits**

2.2.9.1 Lighting circuits are to be provided with overload and short-circuit protection.

## **2.2.10 Protection of meters, pilot lamps, capacitors and control circuits**

2.2.10.1 Protection is to be provided for voltmeters voltage coils of measuring instruments earth indicating devices and pilot lamps, together with their connecting leads by means of protective devices fitted to each insulated pole or phase.

2.2.10.2A pilot lamp installed as an integral part of another item of equipment need not be individually protected provided it is fitted in the same enclosure. Where a fault in a pilot lamp would jeopardize the supply of essential equipment such as lamps are to be individually protected.

## **2.2.11 Protection of batteries**

2.2.11.1 Accumulator batteries other than engine starting batteries are to be protected against short circuit by devices in each insulated pole, placed in a position adjacent to the battery compartment.

## **2.2.12 Protection of communication circuits**

2.2.12.1 Communications circuits other than those supplied from primary batteries are to be protected against overload and short-circuit.

### **Section 3**

#### **Cables**

##### **3.1 General**

- 3.1.1 Cables are to be in accordance with an acceptable National or International standard due regard being given to the ambient conditions stated in 1.5.

##### **3.2 Insulating materials**

- 3.2.1 Permitted insulating materials with maximum rated conductor temperatures are given in Table 3.2.1.
- 3.2.2 The rated operating temperature of the insulating material is to be at least 10° C higher than the maximum ambient temperature liable to be produced in the space where the cable is installed.
- 3.2.3 Where a rubber or rubber like material with maximum conductor temperature greater than 60° C is used. It is to be readily identifiable.

##### **3.3 Sheaths and protective coverings**

- 3.3.1 Cables are to be protected by one or more of the following and the material of the sheath or protective covering is to be compatible with the material of the insulation:-
- a) Sheath
    - Lead – alloy
    - Copper
    - Non – metallic
  - b) Protective covering
    - Steel – wire armor
    - Steel – tape armor
    - Metal – braid armor (Basket weave)
    - Fibrous braid
- 3.3.2 Unsheathed cables e.g. rubber insulated taped and braided or equivalent may be used only if installed in conduit.
- 3.3.3 Non – metallic sheath : Polychloroprene compound polyvinyl chloride compound and chlorosulphonated polyethylene may be used for impervious sheaths. Other compounds will be given due consideration.
- 3.3.4 Fibrous braid:- Textile braid is to be of cotton, hemp, asbestos, glass or other equivalent fiber, and is to be of strength for the size of the cable. It is to be effectively impregnated with a compound which is resistant to moisture and which is flame retarding.



| <b>Table 3.2.1:- Insulating materials</b>   |                                |
|---|--------------------------------|
| Insulating materials  | Max. Rated conductor temp. o C |
| <b>Elastomeric Compounds</b>  |                                |
| Natural or synthetic rubber (general purpose)   | 60                             |
| <b>Rubber</b>   |                                |
| Butyl rubber  | 80                             |
| Ethylene propylene rubber   | 85                             |
| Silicone rubber   | 95                             |
| <b>Thermoplastic Compounds</b>  |                                |
| Polyvinyl chloride (general purpose)  | 60                             |
| Polyvinyl chloride (heat resisting quality)   | 75                             |
| <b>Other Materials</b>  |                                |
| Minerals  | 95                             |
| Notes:-<br>1. Silicon rubber and mineral insulation may be used for higher temperature (up to 150° C for silicone rubber and up to 250° C for mineral insulation) when installed where they are not liable to be touched by personnel. Proposals for such installations will be specially considered.<br>2. The temperature of the conductor is the combination of ambient temperature and temperature rise due to load.<br>3. Other insulating materials will be considered. |                                |

### 3.3.5 Cables fitted in the following locations:-

- Decks exposed to weather;
- Bathrooms;
- Cargo holds;
- Machinery spaces;

Or any other location where water condensation or harmful vapor (e.g. oil vapor) may be present are to have an impervious sheath. In permanently wet situations, metallic sheaths are to be used for cables with hygroscopic insulation.

### 3.3.6 All cables are to be of flame retardant type or fire-resisting type, except that not flame-retardant cables may be acceptable for final circuits only where cables are installed in metallic conduits having internal diameter not exceeding 25 (mm) and provided the conduits are electrically and mechanically continuous.

### 3.4 Voltage rating

- 3.4.1 The rated voltage of any cable is to be not lower than the nominal voltage of the circuit for which it is used.
- 3.4.2 The voltage drop from the main switchboard but bars to any point in the installation when the cables are carrying maximum current under normal conditions of service is not to exceed 6 percent of the nominal voltage.

### 3.5 Current rating

- 3.5.1. The highest continuous load carried by a cable is not to exceed its current rating. The diversity factor of the individual loads and the duration of the maximum demand may be allowed for in estimating the maximum continuous load and it to be shown on the plans submitted for approval.
- 3.5.2 In assessing the current rating of lighting circuits, every lamp holder is to be assessed at the maximum load likely to be connected to it, with a minimum of 60 W, unless the fitting is to be connected as to take only a lamp rated at less than 60 W.
- 3.5.3 Cable supply winches, cranes, windlasses and capstans are to be suitably rated for their duty. Unless the duty is such as to require a longer time rating, cable for winch or crane motors may be half hour rated on the basis of the half hour (kW) rating of the motors. Cables for windlass and capstan motors are to be not less than one hour rated on the basis of the one hour (kW) rating of the motor. In all cases the rating is to be subject to the voltages drop being within the specified limits.
- 3.5.4 The current ratings given in Table 3.5.1 to 3.5.5 are based on the maximum operating conductor temperatures given in Table 3.2.1. Alternatively current rating in accordance with an acceptable National or International Standard may be applied see 3.1.1.

| <b>Table 3.5.1 : General purpose rubber and PVC insulation current rating (Based on ambient temp. 45° C)</b> |                    |                |                    |
|--|--------------------|----------------|--------------------|
| <b>Nominal cross – section</b>   | <b>Single core</b> | <b>2 core</b>  | <b>3 or 4 core</b> |
| <b>(mm<sup>2</sup>)</b>  | <b>amperes</b>     | <b>amperes</b> | <b>amperes</b>     |
| 1  | 8                  | 7              | 6                  |
| 1.5  | 12                 | 10             | 8                  |
| 2.5  | 17                 | 14             | 12                 |
| 4  | 22                 | 19             | 15                 |

|     |                    |                    |                    |
|-----|--------------------|--------------------|--------------------|
| 6   | 29                 | 25                 | 20                 |
| 10  | 40                 | 34                 | 28                 |
| 16  | 54                 | 46                 | 38                 |
| 25  | 71                 | 60                 | 50                 |
| 35  | 87                 | 74                 | 61                 |
| 50  | 105                | 89                 | 74                 |
| 70  | 135                | 115                | 95                 |
| 95  | 165                | 140                | 116                |
| 120 | 190                | 162                | 133                |
| 150 | 220                | 187                | 154                |
| 185 | 250                | 213                | 175                |
| 240 | 290                | 247                | 203                |
| 300 | 335                | 285                | 235                |
|     | d.c.          a.c. | d.c.          a.c. | d.c.          a.c. |
| 400 | 390          380   | 332          323   | 273          266   |
| 500 | 450          430   | 383          365   | 315          301   |
| 630 | 520          470   | 442          400   | 364          329   |

### 3.6 Correction factors for current rating

3.6.1 Bunching of cables:- Where more than six cables belonging to the same circuit are bunched together a correction factor of 0.85 is to be applied.

**Table 3.5.2 : Heat resisting PVC insulation current rating (Based on ambient temp. 45° C)**

| <b>Nominal cross –<br/>section</b> | <b>Single core</b> | <b>2 core</b>  | <b>3 or 4 core</b> |
|------------------------------------|--------------------|----------------|--------------------|
| <b>(mm<sup>2</sup>)</b>            | <b>amperes</b>     | <b>amperes</b> | <b>amperes</b>     |
| 1                                  | 13                 | 7              | 6                  |
| 1.5                                | 17                 | 10             | 8                  |
| 2.5                                | 24                 | 14             | 12                 |
| 4                                  | 32                 | 19             | 15                 |
| 6                                  | 41                 | 25             | 20                 |
| 10                                 | 57                 | 34             | 28                 |

|     |                    |                    |                    |
|-----|--------------------|--------------------|--------------------|
| 16  | 76                 | 46                 | 38                 |
| 25  | 100                | 60                 | 50                 |
| 35  | 125                | 74                 | 61                 |
| 50  | 150                | 89                 | 74                 |
| 70  | 190                | 115                | 95                 |
| 95  | 230                | 140                | 116                |
| 120 | 270                | 162                | 133                |
| 150 | 310                | 187                | 154                |
| 185 | 350                | 213                | 175                |
| 240 | 415                | 247                | 203                |
| 300 | 475                | 285                | 235                |
|     | d.c.          a.c. | d.c.          a.c. | d.c.          a.c. |
| 400 | 570          560   | 485          475   | 400          390   |
| 500 | 650          620   | 550          530   | 455          435   |
| 630 | 740          670   | 630          570   | 520          470   |

**Table 3.5.3 : Butyl insulation current rating (Based on ambient temp. 45° C)**

| <b>Nominal cross –<br/>section</b> | <b>Single core</b> | <b>2 core</b>  | <b>3 or 4 core</b> |
|------------------------------------|--------------------|----------------|--------------------|
| <b>(mm<sup>2</sup>)</b>            | <b>amperes</b>     | <b>amperes</b> | <b>amperes</b>     |
| 1                                  | 15                 | 13             | 11                 |
| 1.5                                | 19                 | 16             | 13                 |
| 2.5                                | 26                 | 22             | 18                 |
| 4                                  | 35                 | 30             | 25                 |
| 6                                  | 45                 | 38             | 32                 |
| 10                                 | 63                 | 54             | 44                 |
| 16                                 | 84                 | 71             | 59                 |
| 25                                 | 110                | 94             | 77                 |
| 35                                 | 140                | 119            | 98                 |
| 50                                 | 165                | 140            | 116                |
| 70                                 | 215                | 183            | 151                |
| 95                                 | 260                | 221            | 182                |

|     |                    |                    |                    |
|-----|--------------------|--------------------|--------------------|
| 120 | 300                | 255                | 210                |
| 150 | 340                | 289                | 238                |
| 185 | 390                | 332                | 273                |
| 240 | 460                | 391                | 322                |
| 300 | 530                | 450                | 371                |
|     | d.c.          a.c. | d.c.          a.c. | d.c.          a.c. |
| 400 | 610          590   | 519          502   | 427          413   |
| 500 | 690          640   | 587          544   | 483          448   |
| 630 | 740          690   | 672          587   | 553          483   |

**Table 3.5.4 : Ethylene Propylene rubber, cross-linked polyethylene insulation current rating**

**(Based on ambient temp. 45° C)**

| <b>Nominal cross – section</b> | <b>Single core</b> | <b>2 core</b>  | <b>3 or 4 core</b> |
|--------------------------------|--------------------|----------------|--------------------|
| <b>(mm<sup>2</sup>)</b>        | <b>amperes</b>     | <b>amperes</b> | <b>amperes</b>     |
| 1                              | 15                 | 13             | 11                 |
| 1.5                            | 19                 | 16             | 13                 |
| 2.5                            | 26                 | 22             | 18                 |
| 4                              | 35                 | 30             | 25                 |
| 6                              | 45                 | 38             | 32                 |
| 10                             | 63                 | 54             | 44                 |
| 16                             | 84                 | 71             | 59                 |
| 25                             | 110                | 94             | 77                 |
| 35                             | 140                | 119            | 98                 |
| 50                             | 165                | 140            | 116                |
| 70                             | 215                | 183            | 151                |
| 95                             | 260                | 221            | 182                |
| 120                            | 300                | 255            | 210                |
| 150                            | 340                | 289            | 238                |
| 185                            | 390                | 332            | 273                |
| 240                            | 460                | 391            | 322                |

|     |           |           |           |
|-----|-----------|-----------|-----------|
| 300 | 530       | 450       | 371       |
|     | d.c. a.c. | d.c. a.c. | d.c. a.c. |
| 400 | 650 630   | 558 536   | 445 441   |
| 500 | 740 680   | 629 578   | 518 476   |
| 630 | 840 740   | 714 629   | 588 516   |

**Table 3.5.5 : Silicon rubber, mineral insulation current rating****(Based on ambient temp. 45° C)**

| <b>Nominal cross –<br/>section</b> | <b>Single core</b> | <b>2 core</b>  | <b>3 or 4 core</b> |
|------------------------------------|--------------------|----------------|--------------------|
| <b>(mm<sup>2</sup>)</b>            | <b>amperes</b>     | <b>amperes</b> | <b>amperes</b>     |
| 1                                  | 20                 | 17             | 14                 |
| 1.5                                | 24                 | 20             | 17                 |
| 2.5                                | 32                 | 27             | 22                 |
| 4                                  | 42                 | 36             | 29                 |
| 6                                  | 55                 | 47             | 39                 |
| 10                                 | 75                 | 64             | 53                 |
| 16                                 | 100                | 85             | 70                 |
| 25                                 | 135                | 115            | 95                 |
| 35                                 | 165                | 140            | 116                |
| 50                                 | 200                | 175            | 140                |
| 70                                 | 255                | 217            | 179                |
| 95                                 | 310                | 264            | 217                |
| 120                                | 360                | 306            | 252                |
| 150                                | 410                | 349            | 287                |
| 185                                | 470                | 400            | 329                |
| 240                                | 570                | 485            | 400                |
| 300                                | 660                | 560            | 460                |

**Table 3.6.1 : Correction factors for temperature**

| <b>Insulation</b>               | <b>25</b> | <b>30</b> | <b>35</b> | <b>40</b> | <b>45</b> | <b>50</b> | <b>55</b> |
|---------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Rubber of PVC (general purpose) | 1.53      | 1.41      | 1.29      | 1.15      | 1.00      | 0.82      | 0.85      |

|  |      |      |      |      |      |      |      |
|--|------|------|------|------|------|------|------|
| PVC (heat – resisting quality)                       | 1.29 | 1.22 | 1.15 | 1.08 | 1.00 | 0.91 | 0.82 |
| Butyl rubber   | 1.25 | 1.20 | 1.13 | 1.07 | 1.00 | 0.93 | 0.85 |
| Ethylene propylene rubber, cross-linked polyethylene | 1.22 | 1.17 | 1.12 | 1.06 | 1.00 | 0.94 | 0.87 |
| Mineral, silicon rubbers                             | -    | -    | -    | 1.05 | 1.00 | 0.95 | 0.89 |

Notes:-

1. For cables in refrigerated chamber and holds and for vessels restricted to service in non-tropical waters, correction factors for 35° C may be acceptable.
2. Correction factors for intermediate values of the ambient temperature can be ascertained by interpolation.

**Table 3.6.2 : Correction factors for intermittent rating**

| Correction factor | Half – hour rating                      |  | One – hour rating                       |  |
|-------------------|---|--|---|--|
|                   | With metallic sheath (mm <sup>2</sup> ) | Without metallic sheath (mm <sup>2</sup> ) | With metallic sheath (mm <sup>2</sup> ) | Without metallic sheath (mm <sup>2</sup> ) |
| 1.00              | Upto 20                                 | Upto 75                                    | Upto 67                                 | Upto 230                                   |
| 1.10              | 21 – 40                                 | 76 – 125                                   | 68 – 170                                | 231 – 400                                  |
| 1.15              | 41 – 65                                 | 126 – 180                                  | 171 – 290                               | 401 – 600                                  |
| 1.20              | 66 – 95                                 | 181 – 250                                  | 291 – 430                               | -  |
| 1.25              | 96 – 120                                | 251 – 320                                  | 431 – 600                               | -  |
| 1.30              | 131 – 170                               | 321 – 400                                  | -                                       | -  |
| 1.35              | 171 – 220                               | 401 – 500                                  | -                                       | -  |
| 1.40              | 221 – 270                               | -  | -                                       | -  |

3.6.2 Ambient temperature:- The current ratings in Table 3.5.1 to 3.5.5 are based on an ambient temperature of 45° C. For other values of ambient temperature the correction factors shown in Table 3.6.1 are to be applied.

3.6.3 Intermittent service:- Where the load is intermittent, the correction factors in Table 3.6.2 may be applied for half hour and one hour ratings. In no case is a shorter rating than one half hour rating to be used, whatever the degree of intermittency.

### 3.7 Testing

3.7.1 Tests in accordance with an acceptable National or International Standards are to be made at the manufacturer's works prior to dispatch.

### 3.8 Connections between entrained vessels

- 3.8.1 Cables are to be suitable for used in the connections between entrained vessels i.e., are to be flexible, robust and of commensurate cross-section area.
- 3.8.2 The connection is to include provisions for the continuity of out-of-balance or earth-fault current return. The connecting device is to include provisions to ensure that this circuit closed before, and opened after, the live circuits.
- 3.8.3 Terminal plugs and sockets, if used are to be so arranged that any exposed pins cannot be energized.
- 3.8.4 Where hall-return system are used, hull polarity is to be compatible.

### 3.9 Installation of cables

- 3.9.1 Cables runs are to be, as far as practicable, straight and accessible and as high as possible above bilges.
- 3.9.2 Cables having insulating materials with different maximum-rated conductor temperatures are not to be bunched together, or, where this is not practicable, the cables are to be operated so that no cable reaches temperature higher than that permitted for the lowest temperature – rated cable in the group.
- 3.9.3 Cables having a protective covering which may damage the covering of other cables are not to be bunched with those other cables.
- 3.9.4 The minimum internal radius of bends of installed cables is to be generally in accordance with following:-

|                                 |  |
|---------------------------------|--|
| 4d                              | For cables without braiding, armoring or other metal sheath and with an overall diameter not exceeding 25 (mm) |
| 6d                              | For all other cables   |
| (d = overall diameter of cable) |  |

- 3.9.5 Cables, are to be effectively supported and secured in a manner that prevents damage to their coverings.
- 3.9.6 Supports and accessories are to be robust and are to be of corrosion-resistant material or suitably corrosion inhibited before erection.
- 3.9.7 The distance between supports, for horizontal as well as vertical runs of cables, is to be chosen according to the type / size of cable but generally in accordance with Table 3.9.1.



### 3.10 Mechanical protection of cables

3.10.1 Cables exposed to risk of mechanical damage are to be protected by metal channels or casing or enclosed in steel conduit unless the protective covering (e.g. armor or sheath) is adequate to withstand the possible damage.

| Table 3.9.1 : Distance between supports |               | Non-armored cables | Armored cables |
|---|---------------|--------------------|----------------|
| External diameter of cables             |               |                    |                |
| Exceeding                               | Not exceeding |                    |                |
| (mm)                                    | (mm)          | (mm)               | (mm)           |
| -                                       | 8             | 200                | 250            |
| 8                                       | 13            | 250                | 300            |
| 13                                      | 20            | 300                | 350            |
| 20                                      | 30            | 350                | 400            |

3.10.2 Cables, in spaces where there is exceptional risk of mechanical damage (e.g. on weather decks, in cargo hold areas and inside the cargo holds) and also below the floor in engine room, are to be suitably protected, even if armored unless the steel structure affords adequate protection.

3.10.3 Metal casings for mechanical protection of cables are to be efficiently protected against corrosion.

### 3.11 Earthing of metal coverings

3.11.1 Metal coverings of cables are to be effectively earthed at both ends of the cable except in final sub-circuits, where earthing at the supply end and only will be considered adequate. This does not necessarily apply to instrumentation cables where single point Earthing may be desirable to technical reasons.

3.11.2 The electrical continuity of all metal coverings of cables throughout the length of cable, particularly at joints and tapping, is to be ensured.

3.11.3 The lead sheath lead-sheathed cables it not to be used as sole means or earthing the non-current carrying parts of items of equipment.

### 3.12 Penetration of bulkheads and decks by cables

3.12.1 Penetration or watertight bulkheads or decks is to be carried out with either individual watertight glands or with packed watertight boxes carrying several cables. In either case, the watertight integrity and strength of the bulkheads and decks are to be maintained. Where cables with polyvinyl chloride insulation are being installed,

particular care is to be taken to avoid damage to the sheathing during the fitting of watertight bulkhead glands.

3.12.2 Where cables pass through non-watertight bulkheads or structural steel, the holes are to be bushed, in order to protect the cables, with lead or other approved material which will prevent damage to the cables by abrasion. If the steel is 6 (mm) thick, adequately rounded edges may be accepted as the equivalent of bushing.

3.12.3 Cables passing through decks are to be protected by deck tubes or ducts.

3.12.4 Materials used for glands and bushings are to be such that there is no risk of corrosion.

3.12.5 Where rectangular holes are cut in bulkheads or structural steel the corners are to be adequately rounded.

### **3.13 Installation of cables in pipes and conduits**

3.13.1 Installation of cables in pipes and conduits is to be carried out in such a manner that there is no damage to the cable covering.

3.13.2 Metal conduit systems are to be earthed and are to be mechanically and electrically continuous across joints. Individual short lengths of conduit need not be earthed.

3.13.3 The internal radius of bend of pipes and conduit is to be not less than that laid down for cables, provided that for pipes exceeding 64 (mm) diameter the internal radius of bend is not less than twice the diameter of the pipe.

3.13.4 The drawing is factor (ratio of the sum of the cross-sectional areas of the cables, based on their external diameter, to the internal cross-section area of the pipe) is not to exceed 0.4.

3.13.5 Expansion joints are to be provided where necessary.

3.13.6 Cable pipe and conduits are to be adequately and effectively protected against corrosion where necessary openings are to be provided at the highest and lowest points to permit air circulation and to prevent accumulation of water.

3.13.7 Where cables are laid in trunks and the trunks are to be so constructed as not to afford passage for fire from one deck or compartment to another.

3.13.8 Non-metallic ducting or conduit is to be of flame retardant material PVC conduit is not to be used in refrigerated spaces or on open decks, unless specially approved.

### **3.14 Cables for alternating current**

3.14.1 Generally, multi-core cables are to be used in A. C. installations. Where it is necessary to use single-core cables for alternating current circuits rated in excess of 20 amperes the requirements of 3.14.2 to 3.14.8 are to be complied with.

- 3.14.2 Cables are to be either non-armored or armored with non-magnetic material.
- 3.14.2 If installed in pipe or conduit cables belonging to the same circuit are to be installed in the same conduit, unless the conduit or pipe is of non-magnetic material.
- 3.14.3 Cable clips are to include cables of all phases of a circuit unless the clips are of non-magnetic material.
- 3.14.4 When installing two, three or four single – core cables forming respectively single – phase circuits, three – phase circuits or three – phase and neutral circuits, the cables are to be in contact with one another, as far as possible. In any case, the distance between the external covering of two adjacent cables is not to be greater than one diameter.
- 3.14.5 In the case of circuits using two or more parallel connected cables per phase, all cables are to have the same length and cross sectional area.
- 3.14.6 Where single core cables of rating exceeding 50 amperes are used, magnetic material is not to be placed between single – core cables of a group. If these cables pass through steel plates, all cables of the same circuit are to pass through the plate or gland so constructed that there is no magnetic material between the cables and suitable clearance is provided between the cable core and magnetic material. This clearance, wherever practicable, is not to be less than 75 (mm) when the current exceeds 300 amperes. For currents between 50 amperes and 300 amperes the clearance may be proportionately reduced.
- 3.14.7 If single – core cables of current rating greater than 250 amperes are run along a steel bulkhead, where practicable the cables should be spaced away from the steel.

### **3.15 Cable ends**

- 3.15.1 The ends of all conductors of cross-sectional area greater than 4 (mm<sup>2</sup>) are to be fitted with soldering sockets, compression type sockets or mechanical clamps. Corrosive fluxes are not to be used.
- 3.15.2 Cables having hygroscopic insulation (e.g. mineral insulated) are to have their ends sealed against ingress of moisture.
- 3.15.3 Cables with a supplementary insulating belt beneath the protective sheath are to have additional insulation at those points where the insulation of each core makes or may make contact with earthed metal.

### **3.16 Joints and branch circuits in cables systems**

- 3.16.1 Cable runs are normally not to include joints. However, if a joint is necessary it is to be carried so that all conductors are adequately secured, insulated and protected from atmospheric action. Terminals and bus bars are to be of dimensions adequate for the cable rating.

## **Section 4**

### **Switchboards**

#### **4.1 General**

- 4.1.1 Switchboards, section boards and distribution boards are to be constructed of, or enclosed with non-flammable, non-hygroscopic material and are to be so installed that live parts are sufficiently guarded and adequate space is provided for maintenance. Also they are to be protected where necessary in way of pipes etc.
- 4.1.2 All measuring instruments and all apparatus controlling circuits are to be clearly and indelibly labeled for identification purposes. An indelible label is to be permanently secured adjacent to every fuse and every circuit breaker and marked with particulars of the full load current of the generator, motor or cable which the fuse or circuit breaker protects. Where inverse time and / or reverse current devices are provided in connection with a circuit breaker, the appropriate settings of these devices are to be stated on the label. Name plates are to be of flame retardant material.

#### **4.2 Instruments**

- 4.2.1 Sufficient instrumentation is to be provided for measuring voltage, current, frequency and for alternating current generators above 50 (kW).
- 4.2.2 Where alternating current generators are required to operate in parallel, synchronizing arrangements are to be fitted.

#### **4.3 Instrument transformers**

- 4.3.1 The secondary windings of instrument transformers are to be earthed.

#### **4.4 Switchgear**

- 4.4.1 Circuit breakers and switches are to be of the air break type and are to be constructed in accordance with an acceptable National or International Standard.
- 4.4.2 Report of tests to establish the capacity of circuit-breakers are to be submitted for consideration when required.
- 4.4.3 Over current releases are to be calibrated in amperes and settings marked on the circuit breaker.

#### **4.5 Fuses**

- 4.5.1 Fuses are to comply with an acceptable National or International Standard.
- 4.5.2 Fuse links and fuse bases are to be marked with particulars of rated current and rated voltage. Each fuse position is to be permanently and indelibly labeled with the current

carrying capacity of the circuit protected by it and with the appropriate approved size of fuse or replaceable element.

#### **4.6 Testing**

- 4.6.1 Before installation, switchboards complete or in section with all components are to pass the following tests at the manufacturer's works and a certificate furnished. A high voltage test is to be carried out in all switching and control apparatus for systems greater than 60 V with a test voltage of 1000 V plus twice the rated voltage with a minimum of 2000 V at any frequency between 25 and 100 Hz for one minute applied between (a) all current – carrying parts connected together and earth and (b) between current carrying parts of opposite polarity or phases.
- 4.6.2 For systems of 60 V or less the test shall be at 500 V for one minute.
- 4.6.3 Instruments and ancillary apparatus may be disconnected during the high voltage test.
- 4.6.4 Immediately after the high voltage test the insulation resistance between (a) all current – carrying parts connected together and earth and (b) between current carrying, parts of opposite polarity or phase, shall not be less than 1 Megohm when tested with a direct current voltage of at least 500 V.
- 4.6.5 Functional tests. The correct functions of the installation components in line with the connections intended to be made have to be checked as far as possible.

### **Section 5**

#### **5.1 Control Gear**

- 5.1.1 Control gear is to comply with an acceptable National or International Standard, amended where necessary for ambient temperature.
- 5.1.2 Control gear, including isolating and reversing switches, is to be so arranged that shunt field circuits are not disconnected without adequate discharging path being provided.

#### **5.2 Testing**

- 5.2.1 Control gear and resistors are to be tested by the manufacturers with a high voltage applied between the earthed frame and all live parts and a certificate furnished by them to this effect. For operating voltages above 55 V, the test voltage is to be 1000 V plus twice the rated voltage with a minimum of 2000 V. The voltage is to be alternating at any frequency between 25 and 100 Hz and is to be maintained for one minute without failure.

- 5.2.2 Control gear and resistors operating at 55 V or below are to be tested to 500 V for one minute.
- 5.2.3 Immediately after the high voltage test, the insulation resistance between (a) all current – carrying parts connected together and earth, and (b) between current – carrying parts of opposite polarity or phase, is not to be less than 1 mega ohm when tested with a direct current voltage of at least 500 V.
- 5.2.4 Instruments and ancillary apparatus may be disconnected during the high voltage test.
- 5.2.5 Functional Test:- The correct functions of the installation components in line with the connections intended to be made, have to be checked as far as possible.

### **Controls**

#### **Rotating Machines Construction and testing**

##### **6.1 General**

- 6.1.1 Rotating machines are to be constructed in accordance with an acceptable National or International Standard, due regard being given to the ambient conditions stated in 1.5.

##### **6.2 Rating**

- 6.2.1 Vessels service generators including their exciters, and continuously rated motors are to be suitable for continuous duty at their full rated output at maximum cooling air or water temperature for an unlimited period, without the limits of temperature rise in 6.3 being exceeded. Other generators and motors are to be rated in accordance with the duty which they are to perform, and when tested under rated load conditions the temperature rise is not to exceed the values in 6.3. Alternatively limits of temperature rise in accordance with an acceptable National or International Standard may be applied.

##### **6.3 Temperature rise**

- 6.3.1 The limits of temperature rise specified in Table 6.3.1 are based on a cooling air temperature of 45° C and a cooling water temperature of 30° C.
- 6.3.2 If the temperature of the cooling medium is known to exceed the value given in 6.3.1 the permissible temperature rise is to be reduced by an amount equal to the excess temperature of the cooling medium.
- 6.3.3 If the temperature of the cooling medium is known to be permanently less than the value given in 6.3.1, the permissible temperature rise may be increased by an amount

equal to the difference between the declared temperature and that given in 6.3.1 up to a maximum of 15° C.

| <b>Table 6.3.1 : Limits of temperature rise in °C</b> |  |   |  |          |          |
|---|--|---|--|----------|----------|
| <b>Item</b>   | <b>Part of machine</b>   | <b>Method of measurement of temperature</b> | <b>Temperature rise in air-cooled machines °C</b>  |          |          |
|   |  |   | <b>Insulation Class</b>  |          |          |
|   |  |   | <b>A</b>   | <b>E</b> | <b>B</b> |
| 1 (a)   | a. c. winding  | R   | 50   | 65       | 70       |
|   |  | T   | 40   | 55       | 60       |
| (b)   | Field winding of a. c. and d. c. machines having d. c. excitation other than those in Item 2 and 3 | R   | 50   | 65       | 70       |
|   |  | T   | 40   | 55       | 60       |
| (c)   | Winding of armatures having commutators  | R   | 50   | 65       | 70       |
|   |  | T   | 40   | 55       | 60       |
| 2   | Field winding of turbine – type machines having d. c. excitation                                   | R   | -  | -        | 80       |
| 3 (a)   | Low – resistance field windings of more than one layer and compensating windings                   | T. R.                                       | 50   | 65       | 70       |
| (b)   | Single – layer windings with exposed bare surfaces   | T. R.                                       | 55   | 70       | 80       |
| 4   | Permanently short – circuited windings un-insulated  | T   | 50   | 65       | 70       |
| 5   | Permanently short – circuited windings un-insulated  | T   | The temperature risk of these parts shall in no case reach such a value that there is a risk of injury to any insulating or other material on adjacent parts |          |          |
| 6   | Iron core and other parts not in contact with windings   | -   | The temperature rise of these parts shall in no case reach such a value that there is a risk of injury to any  |          |          |

|  |  |   |  |    |    |
|--|--|---|--|----|----|
|  |  |   | insulating or other material on adjacent part. |    |    |
| 7  | Iron core and other parts in contact with windings | T | 50   | 65 | 70 |
| 8  | Commutators and slip – rings open or enclosed      | T | 50   | 60 | 70 |
| <p>Notes:-</p> <ol style="list-style-type: none"> <li>1. T = Thermometer method<br/>R = Resistance method</li> <li>2. When Class F or Class H insulation is employed the permitted temperature rises are respectively 20° C and 40° C higher than the values given for Class B insulation.</li> <li>3. Classes of insulation are to be in accordance with IEC Publication 85 (1957) – "Recommendations for the Classification of Material for the insulation of Electrical Machinery and Apparatus in relation to their Thermal Stability in Service"</li> </ol> |  |   |  |    |    |

#### 6.4 Direct current service generators

- 6.4.1 Shunt wound direct current generators are to be provided with automatic voltage regulators.
- 6.4.2 Direct current generators used for charging batteries without series – regulating resistors are to be either:-
- a) Shunt wound, or
  - b) Compound wound with switches arranged so that the series winding can be switched out of service.
- 6.4.3 If the terminal voltage is required to be manually adjusted to ensure satisfactory operation of generators then facilities are to be provided at the switchboard or at an appropriate and convenient control position to enable such adjustment to be made.
- 6.4.4 For each direct current generator, whilst being driven by its prime mover, at any temperature within the working range, the means provided is to be capable of adjusting the voltage at any load between no load and full load to within:-
- a) 10 percent of rated voltage for generators of rating less than 100 (kW).
  - b) 0.5 percent of rated voltage for generators of rating exceeding 100 (kW).
- 6.4.5 The inherent rules of service generators is to be such that the following conditions are fulfilled:-



- a) For shunt or stabilized shunt wound generators when the voltage has been set at full load, the steady voltage at no load is not to exceed 115% of the full load value and the voltage obtained at any intermediate value is not to exceed no load value, operating temperature, and starting at 20 percent load with voltage within 1 percent of rated voltage, then at full load the voltage is to be within 2.5 percent of rated voltage. The average of the ascending and descending load / voltage curves between 20 percent load and full load is not to vary more than 4 percent from rated voltage.
  - b) For compound wound generators with the generator at full load operating temperature, and starting at 20 percent load with voltage with 1 percent of rated voltage, then at full load the voltage is to be within 2.5 percent of rated voltage. The average of the ascending and descending load / voltage curves between 20 percent load and full load is not to vary more than 4 percent from rated voltage.
- 6.4.6 Generators are to be capable of delivering continuously the full load current and normal rated voltage at the terminals when running at full load engine speed at all ambient temperatures up to the specified maximum.
- 6.4.7 Generators required to run in parallel are to be stable from no load up to the total combined load of the group, and load sharing is to be satisfactory.
- 6.4.8 The series winding of each two – wire generator is to be connected to the negative terminal.
- 6.4.9 Equalizer connections are to have cross-sectional area appropriate to the system but in no case less than 50 percent of that of the negative connection from the generator to the switchboard.

## **6.5 Alternating current service generators**

- 6.5.1 Each alternating current service generator, unless of the self-regulating type, is to be provided with automatic means of voltage rules.
- 6.5.2 The voltage of rules of any alternating current generator with its regulating equipment is to be such that at all loads from zero to full load the voltage at rated power factor is maintained under steady conditions within 2.5 percent of rated voltage.
- 6.5.3 Alternating current generators required to run in parallel are to be stable from 20 percent full load (kW) up to the total combined full load (kW) of the group, and load sharing is to be such that the load on any generator does not normally differ from its proportionate share of the total load by more than 15 percent of the rated output (kW) of the largest machine or 25 percent of the rated output (kW.) of the individual machine, whichever is less.

- 6.5.4 When generators are operated in parallel, the KVA loads of the individual generating sets are not to differ from their proportion at share of the total KVA load by more than 5 percent of the rated KVA output of the largest machine when operating at 0.8 power factor.

## **6.6 Inspection and testing**

- 6.6.1 On machines for essential services tests are to be carried out in accordance with the relevant standard and a certificate furnished by the manufacturer.
- 6.6.2 Generators and motors of 100 (kW) or over intended for essential services are to be inspected by the Surveyors during manufacture and testing.

## **Section 7**

### **Transformers – Construction and Testing**

#### **7.1 General**

- 7.1.1 Transformers are to be in accordance with an acceptable National or International Standard due regard being given to the ambient conditions stated in 1.5.
- 7.1.2 Transformers are to be of the dry, natural air cooler type. Proposals for the use of liquid cooled transformers will be subject to special consideration.

#### **7.2 Installation**

- 7.2.1 Transformers are to be placed in easily accessible well ventilated spaces free from any gaseous or acid fumes. They are to be clear of non-protected ignitable materials, and so arranged as to be protected against shocks and any damage resulting from water, oil, liquid fuel steam etc.

#### **7.3 Construction**

- 7.3.1 Transformers are to be double wound except those for motor starting.
- 7.3.2 Each transformer is to be provided with a name plate of corrosion – resistant metal giving information on make, type serial number insulation class and any other technical data necessary for the application of the transformer.

#### **7.4 Rules**

- 7.4.1 The inherent rules at 0.8 power factor is not to exceed 5 percent.
- 7.4.2 Rules of the complete system is to comply with 3.4.2.

#### **7.5 Short circuit**

- 7.5.1 All transformers are to be constructed to withstand, without damage, the thermal and mechanical effects of a short-circuit at the terminals of any winding for 2 seconds with rated primary voltage and frequency without damage.

**7.6 Tests**

- 7.6.1 Transformers for essential services are to be tested by the manufacturer in accordance with the relevant standard and test certificates supplied

**Section 8****Miscellaneous Equipment****8.1 Accumulator batteries****8.1.1 Construction**

- 8.1.1.1 The cells of all batteries are to be so constructed and secured as to prevent spilling of the electrolyte due to the motion of the vessel and to prevent emission of acid or alkaline spray.
- 8.1.1.2 All batteries are to be provided with durable labels of flame retardant material, giving information on the application for which the battery, is intended, voltage and capacity.

**8.1.2 Location**

- 8.1.2.1 Alkaline batteries and lead acid batteries of the vented type are not to be installed in the same compartment.
- 8.1.2.2 Large batteries are to be installed in a space assigned to them only. A box on deck would meet this requirement if adequately ventilated and provided with means to prevent ingress of water.
- 8.1.2.3 Engine starting batteries are to be located so close as practicable to the engine (s) served. If such batteries cannot be accommodated in the battery compartment, they are to be installed so that adequate ventilation is ensured.

**8.1.3 Installation**

- 8.1.3.1 Batteries should be so arranged that each cell or crate of cells is accessible from the top and at least one side.
- 8.1.3.2 Cells or crates are to be carried on non-absorbent insulating supports. Similar insulators are to be fitted to prevent any movement of cells arising from the motion of the vessel. Adequate space for circulation of air is to be ensured.
- 8.1.3.3 Where acid is used as the electrolyte a tray of acid resisting material is to be provided below the cells unless the deck-below is similarly protected.
- 8.1.3.4 The interiors of all compartments including the shelves, are to be painted with corrosion resistant paint.

8.1.3.5 A permanent notice is to be fitted to all compartments prohibiting naked lights and smoking in the compartment.

8.1.3.6 Switches, fuses and other electrical equipment liable to cause an arc are not to be fitted in battery compartments.

#### **8.1.4 Ventilation**

8.1.4.1 Battery compartments, lockers and boxes are to be adequately ventilated by an independent ventilation system to avoid accumulation of flammable gases. Particular attention should be given to the fact that these gases are lighter than air and tend to accumulate at the top of the spaces.

8.1.4.2 Natural ventilation may be employed if ducts can be run directly from the top of the compartment to the open air with no part of the duct more than 45 degrees from the vertical. If natural ventilation is impracticable, mechanical ventilation is to be installed. Interior surfaces of ducts and fans are to be painted with corrosion resistant paint. Fan motors are not to be located in the air stream.

8.1.4.3 Necessary precautions are to be taken to prevent sparking due to possible contact by the ventilation fan blades with fixed parts.

8.1.4.4 All openings through the battery compartment bulkheads or decks, other than ventilation openings, are to be effectively sealed to reduce the possibility of escape of gas from the battery compartment into the vessel.

### **8.2 Luminaries**

#### **8.2.1 General**

8.2.1.1 Lighting fittings installed in engine rooms or similar spaces where they are exposed to the risk of mechanical damage are to be provided with suitable grilled mechanical guards to protect their lamps and glass globes against such damage.

8.2.1.2 Precautions are to be taken so that a lamp for one voltage cannot be inserted in a lamp holder for another voltage.

8.2.1.3 Incandescent lamps are to be in accordance with the following:-

|     |                        |
|-----|------------------------|
| B22 | up to 250 V and 200 W  |
| F27 | up to 250 V and 200 W  |
| E40 | up to 210 V and 3000 W |

8.2.1.4 Lamp holders are to be constructed of flame-retarding and non-hygroscopic material. All metal parts are to be of robust construction. Goliath landholders (E40) are to be provided with means for locking the lamp in the holder. The temperature of cable

connection is not to exceed the maximum conductor temperature permitted for the cable as given in Table 3.2.1.

8.2.1.5 The ratings of tubular fluorescent lamps are not to exceed 250 V and 80 W.

### **8.3 Accessories – Construction and testing**

#### **8.3.1 Enclosure**

8.3.1.1 Enclosures are to be of metal or of flame – retardant insulating materials.

#### **8.3.2 Inspection and draw boxes**

8.3.2.1 If metal conduit systems are used, inspection and draw boxes are to be of metal and are to be in rigid electrical and mechanical connection with the conduits.

#### **8.3.3 Socket outlets and plugs**

8.3.3.1 Socket outlets and plugs are to be so constructed that they cannot be readily short-circuited whether the plug is in or out and so that a pin of the plug cannot be made to earth either pole of the socket outlet.

8.3.3.2 All socket outlets of current rating 16 amperes or more are to be provided with a switch.

8.3.3.3 Where it is necessary to earth the non-current-carrying parts of portable or transportable equipment, an effective means of earthing is to be provided at the socket outlet.

8.3.3.4 In all wet situations socket outlets and plugs are to be effectively shielded against rain and spray and are to be provided with means for maintaining this quality after removal of the plug.

### **8.4 Heating and cooking equipment**

#### **8.4.1 General**

8.4.1.1 Heaters are to be so constructed, installed and protected that clothing, bedding and other inflammable material cannot come in contact with them in such a manner as to cause risk of fire. There is to be no excessive heating of adjacent bulkheads or decks.

### **8.5 Lightning conductors**

8.5.1 Lightning conductors are to be fitted to each mast of all wood, composite and steel vessels having wooden masts or topmasts. They need not be fitted to steel vessels having steel masts, unless the mast is partly or completely insulated from the vessels hull.

8.5.2 Lightning conductors are to be run as straight as possible, and sharp bends in the conductors are to be provided. All clamps used are to be of brass or copper, preferably

of the serrated contact type, and efficiently locked. Soldered connections are not acceptable.

- 8.5.3 The resistance of the lightning conductors, measured between the mast head and the position on the earth plate or hull to which the lightning conductor is earthed, is not to exceed 0.02 ohms.
- 8.5.4 The lightning conductors are to be composed of continuous copper tape and / or rope, having a section not less than 100 (mm<sup>2</sup>) and are to be riveted with copper rivets or fastened with copper clamps to an appropriate copper spike of not less than 13 (mm) in diameter and projecting at least 150 (mm) above the top of the mast. The lower end of the lightning conductor is to be securely clamped to a copper plate having an area of at least 0.2 (m<sup>2</sup>), fixed to the vessel's hull well below the light load waterline in such a manner that it is immersed under all conditions of heel. In steel vessels fitted with wooden masts, the lower end of the lightning conductor is to be securely clamped to the nearest metal forming part of the hull.

## **Section 9**

### **Trials**

#### **9.1 General**

- 9.1.1 Before a new installation, or any alternation or addition to an existing installation, is put into service the tests and trials specified in this Section are to be carried out. These tests and trials are intended to demonstrate the general condition of the installation at the time of completion. They are in addition to any acceptance tests which may have been carried out at the manufacturer's works.

#### **9.2 Insulation resistance measurement**

- 9.2.1 Insulation resistance is to be measured using a self – contained instrument such as a direct reading ohm-meter of the generator type applying a voltage of at least 500 V. Where a circuit incorporates capacitors of more than 2 $\mu$ F total capacitance, constant – voltage type instrument is to be used to ensure accurate test readings.
- 9.2.2 Power and light circuits:- The insulation resistance between all insulated poles and earth and where practicable, between poles, is to be at least 1 mega ohm. The installation may be subdivided and appliances may be disconnected if initial tests produce results less than this figure.
- 9.2.3 Low voltage circuits:- Circuits operating at less than 55 V are to have an insulation resistance of at least 0.33 mega ohm.

9.2.4 Switchboards, section boards and distribution boards:- The insulation resistance is to be at least 1 mega ohm when measured between each bus bar and earth and between bus bars. The test may be made with all circuit breakers and switches open, all fuse links for pilot lamps, earth fault-indicating lamps, voltmeters, etc., removed and voltage coils temporarily disconnected, where otherwise damage may result.

9.2.5 Generators and motors:- The insulation resistance of generators and motors, in normal working condition and with all parts in place, is to be measured and recorded. The test should be carried out with the machine hot, if possible. The insulation resistance of generator and motor cables, field windings and control gear is to be at least 1 mega ohm.

### **9.3 Earth continuity**

9.3.1 Tests are to be made to verify that all earth continuity conductors are effective and that the bonding and earthing of metallic conduit and / or sheathing of cables is effective.

### **9.4 Performance**

9.4.1 It is to be established that the provisions of the Rules have been complied with respect of the criteria mentioned in this sub-section.

9.4.2 Temperatures of joints, connections, circuit-breakers and fuses.

9.4.3 The operating of engine governors, synchronizing devices over speed trips, reverse current reverse power, over current and under voltage trips and other safety devices.

9.4.4 Satisfactory commutation, excitation and performance of each generator throughout a run at a full rated load.

9.4.5 Voltage rules of every generator when full rated load is suddenly thrown off.

9.4.6 For alternating current and direct current generators, satisfactory parallel operation and (kW) load sharing of all generators capable of being operated in parallel at all loads up to normal working load. For alternating current generators satisfactory parallel operation and KVA load sharing of all generators capable of being operated in parallel at all loads up to normal working load.

9.4.7 All essential motors and other important equipment are to be operated under service conditions, though not necessarily at full load or simultaneously, for a sufficient length of time to demonstrate that they are satisfactory.

### **9.5 Voltage drop**

9.5.1 Voltage drop is to be measured, where necessary, to verify that this is not excessive.

**End of Chapter**

# **ANNEXURE – 2**

## **FORMS**

**As per IWAI 2013 Model Rules and / or as may be issued by GMB**  
**Through Executive Order**



**FORM NO. 1****(Rule 1.12)****Official Log Book****OFFICIAL LOG BOOK****For****AN INLAND MECHANICALLY PROPELLED VESSEL****(See Sub-rule 1.12 of these Rules and Section 63Cof IV Act 1917)**

| Name of Vessel                               | Official No. | Port of Registry | Registered Tonnage                            |     | Name of Master | No. of his Certificate |
|--|--------------|------------------|---|-----|----------------|------------------------|
|  |              |                  | Gross   | Net |                |                        |
|  |              |                  |   |     |                |                        |
| Port at which and date when voyage commenced |              |                  | Port at which and date when voyage terminated |     |                |                        |

**DIRECTIONS AS TO KEEPING OFFICIAL LOGS**

1. An official log shall be kept in the prescribed form in every Inland Vessel.
2. The official log may, at the discretion of the master or owner, be kept distinct from or united with the ordinary ship's log so that in all cases the spaces in the official log book be duly filled up.
3. The importance of keeping this book properly, and duly making all the entries at the proper time, and with the strictest regard to form, cannot be too strongly impressed on masters. By neglecting to do so masters render themselves liable to heavy penalties, and their owners to serious loss whilst member of their crew will suffer inconvenience from not being able to obtain records of their services. The absence of proper entries will also prevent fines or forfeitures from being enforced and will tend to prevent the maintenance of discipline.
4. An entry required by the Act in the official log book shall be made as soon as possible after the occurrence to which it relates, and, if not made on the same day as that occurrence, shall be made and dated so as to show the date of the occurrence and of the entry respecting it.
5. Every entry in the official log book shall be signed by the master and by the officer or some other member of the crew and also.

6. If it is an entry of injury or death, shall be signed by the medical officer on board, if any, and if it is an entry of wages due to or the property of a seaman or apprentice who dies, shall be signed by the officer and by some members of the crew besides the master.
7. Every entry made in an official log book in the manner provided by these rules shall be admissible in evidence.
8. Care must be taken whenever there is a change of master to see that documents handed over are up-to-date.
9. Entries must be made in order of date, and no blanks should be left.
10. If any entry in the Official Log relates in any way to a member of the crew the page number is to be entered against the man's name in the Official Log and Index.

**Entries required to be made in official log books**

1. If any offence within the meaning of the Act of desertion or absence without leave or against discipline is committed or if any act of misconduct is committed for which the offender's agreement imposes fine and it is intended to enforce the fine.
  - a) An entry of the offences or acts shall be made in the official log book and signed by the master and one of the persons employed or engaged in any capacity on board of the mechanically propelled vessel;
  - b) The offender shall be furnished with a copy of the entry and have the same read over distinctly and audibly to him and may thereupon make such reply thereto as he thinks fit;
  - c) A statement to a copy of the entry having been so furnished and entry having been so read over and the reply, if any made by the offender shall likewise be entered and signed in the manner aforesaid;
  - d) In any subsequent legal proceedings the entries by this section required shall, if practicable, be produced or proved, and in default of such production or proof, the court hearing the case may in its discretion refuse to receive evidence of the offence or act of misconduct.
2. Every case in which the crew has faced shortage of food and / or drinking water.
3. Every case in which a member of the crew is promoted to a higher grade of service with the date of such promotion, the grade and the rate of wages which the seaman is to receive.
4. In case of illness, frequent entries (daily if possible) showing the progress and treatment of patient.

5. Every case of drunkenness or misconduct on the part of any member of crew whether the Master wishes the case to be investigated or not.
6. Every important accident or damage to ship or cargo.
7. Every conviction by a legal tribunal of a member of his crew and the punishment inflicted;
8. A report on the quality of work of each member of his crew; or a statement that the master declines to give an opinion thereon with a statement of his reasons for so declining.
9. Every case of illness, hurt or injury happening to a member of his crew with the nature thereof and the medical treatment adopted (if any);
10. Every case of death happening on board and the cause thereof, together with such particulars as may be prescribed;
11. Every birth happening on board, with the sex of the infant, the names of the parents and such other particulars as may be prescribed;
12. The name of every seaman or apprentice who ceases to be a member of the crew otherwise than by death, with the place, time, manner and cause thereof;
13. The wages due to any seaman or apprentice who dies during the voyage and the gross amount of all deductions to be made there from;
14. The money or other property taken over of any seaman or apprentice who dies during the voyage;
15. Any other matter which is to be prescribed for entry in the official log book.

**FORM No. 1 A****(Rule 2.6.3)****Form for expressing the intention to build a new vessel****To,****Chief Surveyor / Competent Authority,****Govt. of \_\_\_\_\_**

**Subject:- Expressing of Intention to Build a New Inland Mechanically  
Propelled Vessel.**

Dear sir,

I / We \_\_\_\_\_ (name of the owner / company) intend to order building of a new mechanically propelled vessel to be registered in the State within the provisions of the Inland Vessel Act 1917.

You are requested to record the proposed details and accord the category under which the vessel is to be constructed. We hereby undertake to have the vessel constructed and equipped as per the construction rules applicable to the category of vessel assigned.

1. Owner's name and address
2. Length, breadth and depth of vessel\
3. Type of Vessel  
(Passenger, cargo cum passenger Chemical Carrier,  
Liquid Carrier etc)
4. Intended Area of Operation (Zone 1/2/3)
5. Particulars of hull
  - a) Builders name and address
  - b) Material of the hull
  - c) Whether with a deck above free board deck
6. Particulars of the propulsion of Engines
  - (a) Number of sets with BHP of each
  - (b) Manufacturer's name and brand

**Signature of Owner**

Enclosure:- Plans, Drawings etc. as per Rule 2.8.4 (b), (c) &amp; (d)

**FORM No. 2****(Rule 2.7.2)****Application for Survey of Inland Vessel****To,****Date:-****The Chief Surveyor / Surveying Authority****Place:-****At Port .....****Application for (indicate type) Survey of Inland Vessel**

I / We the authorized persons under the law hereby apply to you to make necessary arrangement for the Initial / Periodical / Dry Docking / Special Survey (strike out the not applicable ones) of the Inland Vessel detailed below:-

The particulars of the Vessel are as under:-

1. Name of vessel
2. Official No. of the vessel
3. Port of registry of vessel
4. Tonnage (i) Registered ..... (ii) Gross .....
5. Type of the vessel  
(Passenger / Passenger – cum – cargo / Cargo / Tanker – state type etc)
6. Category of the Vessel
7. Year Hull Built
8. Address of Hull Builder
9. Hull Dimensions
10. Place and date of last survey
11. Type & BHP of main propulsion Machinery
12. Details of other machineries
13. Owner's name and address with telephone no.
14. Agents name and address with telephone no.
15. Date and time of proposed visit of surveyor
16. Place of proposed Survey.

Station .....

Signature of Owner / Master / Authorized Person

Date .....

## Enclosures:-

1. Documents as per requirement
2. Proof of payment of Survey Fees and other charges
3. Copy of last Certificate of Survey
4. Copy of Certificate of Registration (if already registered)
5. Document establishing the Authority of Authorized Person (if making request)

**FORM No. 3****(Rule 2.7.4 a)****Particulars to be furnished for Survey of New Vessel or Vessels which  
are to be surveyed for the first time**

1. Name of vessel (if already named)
2. Owner's name and address
3. Length, breadth and depth of vessel
4. Type of Vessel.  
(Passenger, cargo cum passenger, Chemical Carrier, Liquid Carrier etc.)
5. Particulars of hull
  - a) Year of built
  - b) Builders name and address
  - c) Builders certificate
  - d) Material of the hull
  - e) Number of Bulkhead, their placement and thickness
  - f) Hull plating material and thickness
6. Particulars of propulsion of Engines
  - a) Number of sets fitted
  - b) Manufacturer's name and brand
  - c) Model Number
  - d) Year of built
  - e) Type of Engine with HP of each
  - f) Diameter of propulsion shaft and materials
  - g) Type and Number of gears
  - h) Test certificate
7. Particulars of equipment
  - a) Anchor – Port, Star board (weight & Material of each)
  - b) Anchor – Spare (weight & material of

each Equipment

- c) Chain : Size type and length and test certificate (Port)
- d) Chain : Size type and length and test certificate (Star board)
- e) Ropes – Size, material and number of ropes
- f) Search Lights, number size and power
- g) Life buoys, buoyant apparatus with self ignited lights, number with buoyant lanyard
- h) Navigation lights giving particulars and certificate, main mast, auxiliary mast, port, star board, stem, anchor not under command
- i) Shapes for anchor not under command etc.
- j) Sound signals : Mechanical or Electrical

8. Particulars of fire appliance

- a) Number, size and capacity of fire pumps
- b) Fire mains, diameter, material and number of hydrants
- c) Number of hose
- d) Nozzles
  - (i) Jet type
  - (ii) Spray type
  - (iii) Jet / Spray type
- e) Any other equipment

9. Number of portable fire extinguisher with particulars and name of manufacturers

- a) Soda Acid
- b) Foam
- c) Dry Powder



- d) Any other types
- 10. Particulars of communication equipment
- 11. Particulars of navigation equipment
- 12. Particulars of pollution control devices
  - a) Sewage treatment and disposal
  - b) Solid waste processing and disposal
  - c) Sound Pollution Control
  - d) Water consumption / day
  - e) Source of water
- 13. Plans, Drawings etc. : As per Rule 2.7.4 of the Rules

**FORM No. 4****(Rule 2.7.5)****Appointment of Date and Time of Survey of Inland Vessels**

Ref No.:

Dated:

To,

The owner or master,

(Name of the Inland Vessel)

Sir,

This has reference to your request for (Type of Survey) Survey of the Inland Vessel under Inland Vessel Act 1917 vide application No. \_\_\_\_\_ dated \_\_\_\_\_

Please be informed that the Surveyor will be boarding the vessel at \_\_\_\_\_ hrs on \_\_\_\_\_ for the purpose of the requested survey.

You are advised to keep all the documents and the vessel ready for the requested survey in accordance with the Inland Vessel Act 1917 and the Inland Vessel Rules of the State.

In case undue delay owing to lack of readiness of the vessel and / or its crew, the Surveyor may have to postpone the Survey for which all costs shall have to be borne by you in accordance with the Rules in force.

Yours Sincerely,

Chief Surveyor / Surveyor.

**FORM No. 5****(Rule 2.8.5)****Intimation of Defects / Deficiencies observed during the Survey of  
Inland Vessels**

Ref No.:

Dated:

To,

The owner or master,

(Name of the Inland Vessel)

Sir,

This has reference to (Type of Survey) survey of the above referred Inland Vessel carried out by me on \_\_\_\_\_ in accordance with the Inland Vessel Act 1917 and the applicable State Rules.

Please be advised that below detailed deficiencies / defects were observed during the Survey:-

- a) Hull -
- b) Machinery –
- c) Equipment –
- d) Documentation and Records –
- e) Manning –

You are requested to make good the above defects / deficiencies within days from the issuance of this letter and intimate the compliance in writing to this office for verification of the corrective measures in respect of above deficiencies.

Kindly note that if you fail to make good the above referred deficiencies / defects, your application under which this survey was conducted shall stand closed. Thereafter, you will be required to make a fresh application for the Survey.

Yours Sincerely,

Chief Surveyor / Surveyor.

**FORM No. 6****(Rule 2.9.1)****Declaration of Survey**

Ref.

No.

Dated:

This is to certify that I have surveyed the Inland Vessel named \_\_\_\_\_  
\_\_\_\_\_, Official No. \_\_\_\_\_, in accordance  
with the Inland Vessel Act 1917 and the applicable State Rules.

During the survey, the condition of vessel and its equipment as detailed in the RECORD OF  
VESSEL EQUIPMENT AND VESSEL INFORMATION attached as annexure of this  
Declaration of Survey.

Based on the details contained in this Record of Vessel Equipment and Vessel Information  
together with the number and quality of personnel manning the vessel, the vessel is fit for and  
inland waterways worthy for the trade / purpose stated therein.

Surveyor

Enclosure:- Record of Equipment and Vessel Information

**RECORD OF EQUIPMENT AND VESSEL INFORMATION**

| <b>Name of vessel</b> | <b>Type of vessel</b> | <b>Category of Vessel</b> | <b>Number of passengers</b> | <b>Official number</b> |
|-----------------------|-----------------------|---------------------------|-----------------------------|------------------------|
|                       |                       |                           |                             |                        |

| <b>Hull Material</b> | <b>Name of the Builder</b> | <b>Place of Building</b> | <b>Date of build</b> | <b>Means of Propulsion</b> | <b>Total BHP of Main Engine</b> | <b>Date of Engine Construction</b> |
|----------------------|----------------------------|--------------------------|----------------------|----------------------------|---------------------------------|------------------------------------|
|                      |                            |                          |                      |                            |                                 |                                    |

| <b>Length</b> | <b>Breadth</b> | <b>Depth</b> | <b>GRT</b> | <b>NRT</b> |
|---------------|----------------|--------------|------------|------------|
|               |                |              |            |            |

| <b>Fire fighting</b>        | <b>Number / Type</b> | <b>Condition</b> | <b>Location</b> |
|-----------------------------|----------------------|------------------|-----------------|
| Fire plan                   |                      |                  |                 |
| Fire pumps (hand)           |                      |                  |                 |
| Fire pumps (mech)           |                      |                  |                 |
| Portable extinguishers      |                      |                  |                 |
| Fixed extinguishing system  |                      |                  |                 |
| Components                  |                      |                  |                 |
|                             |                      |                  |                 |
| Fire buckets                |                      |                  |                 |
| Sand boxes                  |                      |                  |                 |
| Hydrants                    |                      |                  |                 |
| Hoses, fittings and nozzles |                      |                  |                 |

| <b>Equipment</b>       | <b>Number</b> | <b>Condition</b> | <b>Location</b> |
|------------------------|---------------|------------------|-----------------|
| Anchors                |               |                  |                 |
| Anchor cables / chains |               |                  |                 |
| Bilge pumps            |               |                  |                 |
| Winches                |               |                  |                 |

|                  |  |  |  |
|------------------|--|--|--|
| Cranes           |  |  |  |
| Derricks         |  |  |  |
| Towing equipment |  |  |  |
| Ropes and lines  |  |  |  |
| Collision mat    |  |  |  |
| Gangway          |  |  |  |
| Fenders          |  |  |  |
| Boat hook        |  |  |  |
| First aid kit    |  |  |  |
| Binoculars       |  |  |  |
| Waste containers |  |  |  |
| Heaving line     |  |  |  |
| Axe              |  |  |  |
| Torch            |  |  |  |

| Navigation Equipment     | Number | Condition | Location |
|--------------------------|--------|-----------|----------|
| Navigation lights        |        |           |          |
| Sound signals            |        |           |          |
| Shapes                   |        |           |          |
| Radar                    |        |           |          |
| Compass                  |        |           |          |
| GPS receivers            |        |           |          |
| Echo sounder             |        |           |          |
| Communications equipment |        |           |          |
| Nautical publications    |        |           |          |
| Log book                 |        |           |          |

| Location of passengers on specific decks and spaces in maximum loaded condition |  |  |  |  |  |  |
|---|--|--|--|--|--|--|
| Deck / Space  |  |  |  |  |  |  |
| Max. number of passengers   |  |  |  |  |  |  |

| <b>Free board</b>                  |       |  |  |  |
|------------------------------------|-------|--|--|--|
| Minimum freeboard, equivalent to:- | ..... |  |  |  |
| Number of passengers               |       |  |  |  |
| Cargo (tons)                       |       |  |  |  |

| <b>Life – saving equipment</b>  | <b>Number</b> | <b>Type / Condition</b> | <b>Location</b> |
|---------------------------------|---------------|-------------------------|-----------------|
| Life jackets                    |               |                         |                 |
| Life boats                      |               |                         |                 |
| Life rafts                      |               |                         |                 |
| Launching arrangements          |               |                         |                 |
| Flotation devices               |               |                         |                 |
| Life buoys                      |               |                         |                 |
| Flares – parachutes             |               |                         |                 |
| Flares – hand held              |               |                         |                 |
| Smoke signals                   |               |                         |                 |
| Emergency communications        |               |                         |                 |
| Radar transponder / reflector   |               |                         |                 |
| Rescue boat                     |               |                         |                 |
| Life raft / life boat equipment |               |                         |                 |

| <b>Machinery / Electrical</b> | <b>Power BHP</b> | <b>Type / Condition</b> | <b>Location</b> |
|-------------------------------|------------------|-------------------------|-----------------|
| Main machinery                |                  |                         |                 |
| Main generator                |                  |                         |                 |
| Emergency generator           |                  |                         |                 |
| Main steering gear            |                  |                         |                 |
| Auxiliary steering gear       |                  |                         |                 |
| Switch board                  |                  |                         |                 |
| Shore connection              |                  |                         |                 |
| Batteries                     |                  |                         |                 |
| Signal light switches         |                  |                         |                 |

| Accommodation / Safety                  | Condition | Comment |
|---|-----------|---------|
| Escape routes                           |           |         |
| Wash rooms                              |           |         |
| Toilets                                 |           |         |
| Galley                                  |           |         |
| Mess room                               |           |         |
| Water tanks                             |           |         |
| Heating / cooling / ventilation         |           |         |
| Berth / locker                          |           |         |
| Access to accommodation                 |           |         |
| Lighting                                |           |         |
| Machinery guards                        |           |         |
| Guard rails                             |           |         |
| Non – slip surfaces                     |           |         |
| Ladders / companion ways                |           |         |
| Noise insulation / protection / notices |           |         |
| Foam flotation material : density       |           |         |

Issued at ..... (Place of issue of certificate) ..... on ..... (Date of Issue) .....

(Signature of authorized official issuing the certificate) (Seal of the issuing authority appropriate)



**FORM No. 7****(Rule 2.10)****Notice Regarding Certificate of Survey**

Ref. No:

Dated:

To,

The Owner / Master,

Inland Vessel \_\_\_\_\_  
\_\_\_\_\_

Sir

This is to advise you that the Certificate of survey of the above named Inland Vessel, surveyed on \_\_\_\_\_ is ready for delivery, and it will be delivered at the office of the under signed at any time during office hours on application and payment of the following dues:-

1. \_\_\_\_\_
2. \_\_\_\_\_

You are hereby reminded of your obligation under section 8 (I) of the Act sending the declaration of survey within 14 days of its receipt by you to the officer appointed by the State Government, failing which you shall be liable to forfeiture under section 8(2).

Yours faithfully,

Certifying Authority

*(Appointed under Section 9(2) of the Act)*

**FORM No. 8****(Rule 2.11)****Application for Certificate of Survey**

From

.....  
.....  
.....

To

Certifying Authority (*appointed under section 9(2) of the Act*)

.....  
.....

Sir,

**Subject : Application for certificate of Survey**

This has reference to your Notice regarding Certificate of Survey No. \_\_\_\_\_  
\_\_\_\_\_ dated \_\_\_\_\_ intimating about the readiness of Certificate of Survey  
in respect of Inland Vessel \_\_\_\_\_

It is requested that the Certificate of Survey may kindly be issued.

Yours faithfully,

Signature

Name of the Owner

**FORM No. 9****(Rule 2.12)****Certificate of Survey – Category A Vessels**

Certificate of Survey No. \_\_\_\_\_ Vessel Category: \_\_\_\_\_

Date of Issue: \_\_\_\_\_ Date of Expiry: \_\_\_\_\_

This is Certificate of Survey has been issued subsequent to Survey carried out of the below detailed inland vessel.

Name of the Vessel \_\_\_\_\_ Official No. \_\_\_\_\_

Port of Registry \_\_\_\_\_ Certificate of Registry No. \_\_\_\_\_

Gross Tonnage \_\_\_\_\_ Registered Tonnage \_\_\_\_\_

Name of the Master \_\_\_\_\_

Master's Coc Grade \_\_\_\_\_ No. \_\_\_\_\_ Place of Issue \_\_\_\_\_

Name and Address of Owner or Agent \_\_\_\_\_

Date Survey Carried Out \_\_\_\_\_ Place Survey Carried Out \_\_\_\_\_

**PLYING LIMITS:-**

Limits beyond which this Vessel is not to ply.

\_\_\_\_\_

\_\_\_\_\_

**NUMBER OF PASSENGERS**

This Inland Vessel is, according to the declaration of the Surveyor, fit to carry, when there is no Encumbrance of Passengers Accommodation.

| Deck       | A   | B   | C   | Second Cabin Passengers | Saloon Passengers |
|------------|---|---|---|-------------------------|-------------------|
| passengers | When plying by night (smooth and partially smooth waters) | When plying by day (smooth and partially smooth waters) | When plying by day on voyages which do not last more than six hours (smooth water only) |                         |                   |

|                       |  |  |  |  |  |
|-----------------------|--|--|--|--|--|
| (i) between decks     |  |  |  |  |  |
| (ii) main decks       |  |  |  |  |  |
| (iii) upper or bridge |  |  |  |  |  |
| TOTAL                 |  |  |  |  |  |
| Grand Total           |  |  |  |  |  |

*\* Two Children under 12 years of age to be reckoned as one passenger*

#### **ENCUMBERANCE:-**

In case the space measured for passenger accommodation is occupied by cattle, or by cargo, or other articles, the above stated passenger carrying capacity is to be adjusted as follows:-

|   |  |  |
|---|--|--|
| When plying by night (Smooth and partially smooth water)                              | Then for every 9 superficial feet of such space so occupied on the deck or in the cabins   | ONE PASSENGER is to be deducted from the numbers above stated. |
| When plying by day (Smooth and partially smooth water)                                | Then for every 6 superficial feet of such space so occupied on the upper or main deck, and for every 9 superficial feet of such space so occupied in the between decks or in the cabins. | ONE PASSENGER is to be deducted from the numbers above stated. |
| When plying by day on voyages which do not last more than 6 hours (smooth water only) | Then for every 3 superficial feet of such space so occupied on the upper or main deck, and every 9 superficial feet of such space so occupied in the between deck or in the cabins.      | ONE PASSENGER is to be deducted from the numbers above stated. |

Freeboard Assigned \_\_\_\_\_ mm; Loading Marks placed on the vessel's side: Yes / No.

Maximum permissible Cargo carriage capacity: \_\_\_\_\_ tons and / or \_\_\_\_\_ passengers.

Safety Equipment carried on the Vessel:-

| Boats |                                 |            | Safety Equipment (LSA / FFA)<br>carried on the vessel |  |
|-------|---------------------------------|------------|---|--|
| Boat  | of the aggregate<br>capacity of | cubic feet |   |  |
|       |                                 |            |   |  |

THIS IS TO CERTIFY that the provision of the law with respect to the survey of the above mentioned Inland Vessel and the Transmission of declaration in respect thereof, have been complied with.

THIS CERTIFICATE, unless previously cancelled or revoked, to be in force until the ..... day of ..... 20.....

Examined and Registered.

Signed by Chief Surveyor

1. If the vessel is out of place of survey, it must be surveyed and have a new Certificate before it first begins to play and after its return or subsequent return to place of survey.
2. THIS CERTIFICATE, OR THE DUPLICATE there of, or copy in the vernacular is to be put up in a conspicuous place or part of the vessel where it will be visible to all persons on board the same.
3. In case of any accident occasioning loss of life, or any material damage affecting the seaworthiness or efficiency or the vessel to be either in the hull or in part of the machinery a report by letter, signed by the Owner or Master is to be forwarded to the authorized engineer and ship surveyor's Office, within 24 hours after the happening of the accident, or as soon thereafter as possible.

**FORM No. 10****(Rule 2.12)****Certificate of Survey – Category B Vessels**

Certificate of Survey No. \_\_\_\_\_ Vessel Category: \_\_\_\_\_

Date of Issue: \_\_\_\_\_ Date of Expiry: \_\_\_\_\_

This is Certificate of Survey has been issued subsequent to Survey carried out of the below detailed inland vessel.

Name of the Vessel \_\_\_\_\_ Official No. \_\_\_\_\_

Port of Registry \_\_\_\_\_ Certificate of Registry No. \_\_\_\_\_

Gross Tonnage \_\_\_\_\_ Registered Tonnage \_\_\_\_\_

Name of the Master \_\_\_\_\_

Master's Coc Grade \_\_\_\_\_ No. \_\_\_\_\_ Place of Issue \_\_\_\_\_

Name and Address of Owner or Agent \_\_\_\_\_

Date Survey Carried Out \_\_\_\_\_

Place Survey Carried Out \_\_\_\_\_

**PLYING LIMITS:-**

Limits beyond which this Vessel is not to ply.

\_\_\_\_\_

\_\_\_\_\_

Freeboard Assigned \_\_\_\_\_ mm; Loading Marks placed on the vessel's side: Yes / No.

Maximum permissible Cargo carriage capacity: \_\_\_\_\_ tons.

Safety Equipment carried on the Vessel:-

| Boats |                                 |            | Safety Equipment (LSA / FFA)<br>carried on the vessel |  |
|-------|---------------------------------|------------|---|--|
| Boat  | of the aggregate<br>capacity of | cubic feet |   |  |
|       |                                 |            |   |  |

THIS IS TO CERTIFY that the provision of the law with respect to the survey of the above mentioned Inland Vessel and the Transmission of declaration in respect thereof have been complied with.

THIS CERTIFICATE, unless previously cancelled or revoked, to be in force until the .....  
day of ..... 20.....

Examined and Registered.

Signed by Chief Surveyor

1. If the vessel is out of place of survey, it must be surveyed and have a new Certificate before it first begins to play and after its return or subsequent return to place of survey.
2. THIS CERTIFICATE, OR THE DUPLICATE there of, or copy in the vernacular is to be put up in a conspicuous place or part of the vessel where it will be visible to all persons on board the same.
3. In case of any accident occasioning loss of life, or any material damage affecting the seaworthiness or efficiency or the vessel to be either in the hull or in part of the machinery a report by letter, signed by the Owner or Master is to be forwarded to the authorized engineer and ship surveyor's Office, within 24 hours after the happening of the accident, or as soon thereafter as possible.

**FORM No. 11****(Rule 2.16.2)****Application for Change of Name of the Vessel**

Dated:

Ref. No :

From

.....  
.....  
.....

To,

The Chief Surveyor of Inland Vessels,

.....

Sir,

Sub : Change of name of the vessel on Certificate of Survey No. ....

I ..... R / O ..... being  
the owner / master of the Inland Vessel ..... (name)  
bearing Official No. .... hereby request that the name of the vessel may be  
changed as ..... (here enter the new  
name).

The certificate of survey No. .... dated ..... in original is enclosed  
herewith for making the change of name.

Signature

Name of owner / master

Enclosure: As stated above.



**FORM No. 11 (a)****(Rule 2.3.6)****Detention Order of the Vessel**

Dated:

Place:

To,

The Master / Owner,

Inland Vessel:- \_\_\_\_\_

Kindly be advised that Inland Vessel ..... Official No. ....  
of ..... Port of registry was inspected by the undersigned at .....  
on ..... at the port of .....

In view of the defects / deficiencies listed as annexure to this letter, the vessel is hereby provisionally detained under the power vested under rule 2.4.6 Inland Vessels Rules of the State.

The Vessel is forbidden to sail out from the port last inspected by the undersigned till further orders.

The master / owner have been issued copy of this order together with annexure on ..... at .....

OR

The master / owner have refused to accept the Order and the Order is pasted on the vessel on ..... in the presence of ..... whose signature are appended below.

Signature

**FORM No. 12****(Rule 3.3.1)****Book of Registration**

Registration Mark \_\_\_\_\_

Name of Vessel \_\_\_\_\_

Port of Registry \_\_\_\_\_ Year of Registry \_\_\_\_\_

Name of the Owner \_\_\_\_\_

Address of  
Owner \_\_\_\_\_**DESCRIPTION OF INLAND VESSEL**

Type of Vessel Cargo / Passenger etc. \_\_\_\_\_ Category \_\_\_\_\_

Gross Tonnage \_\_\_\_\_ Registered Tonnage \_\_\_\_\_

**PARTICULARS OF VESSELS**

Length overall \_\_\_\_\_

Breadth Extreme \_\_\_\_\_

Depth of underside of deck amid ships, at side \_\_\_\_\_

Builder Name and Address \_\_\_\_\_

Year of Built \_\_\_\_\_

Type of Hull wood, steel etc. \_\_\_\_\_

Number of Decks \_\_\_\_\_

No. of Bulkheads \_\_\_\_\_

**TRANSACTION**Name of person from whom  
title is derivedNo. of Shares  
affectedDate of and hour  
of Registry**ENGINE**

Internal combustion engine No. \_\_\_\_\_

Description \_\_\_\_\_

No. of sets \_\_\_\_\_

Made by \_\_\_\_\_

Year of Make \_\_\_\_\_

Surface, jet or Non condensing \_\_\_\_\_

No. of cylinders per set \_\_\_\_\_

Diameter of cylinder in inches \_\_\_\_\_

Stroke in inches \_\_\_\_\_

N.H.P. \_\_\_\_\_ B.H.P. \_\_\_\_\_ I.H.P. \_\_\_\_\_

**PROPULSION**

Type : Single/twin screw/side quarter etc. \_\_\_\_\_

Revolution per minute (RPM) \_\_\_\_\_ Speed of Vessel \_\_\_\_\_

Propulsion geared or direct driven \_\_\_\_\_

REGISTERING AUTHORITY

Date \_\_\_\_\_

**SUBSEQUENT TO REGISTRATION**

Nature & Date of transaction

Name, Residence and occupation

Number of transaction of

Transferee Mortgagee or other

Person acquiring title or power

**FORM No. 13****(Rule 3.4)****Application for Registration**

To

The Registering Authority,

\_\_\_\_\_

I,

.....

Resident of .....

being the Owner / Master of an Inland Vessel .....

hereby request that the said vessel be registered at the .....

I agree to pay such fees as may be payable under the Rules. Particulars in respect of the said Vessel is as under:-

1. Owner's name and address in full
2. Occupation
3. Name of Master and his Certificate No.
4. Name of Registry and No. if previously registered
5. When and how the vessel was secured
6. Kind of vessel, viz. motor, name and address of engine makers with horse power, speed and the year of make.
7. Name and address of builders with place and year of build.
8. Details of Insurance Certificate Enclosures:-
  - a) A statement by the owner that the provisions of the Act and these rules have been complied with; A duplicate of the Certificate of Survey;
  - b) Challan receipt evidencing payment of such fees as specified in the schedule for the registration of the vessel.
  - c) Copy of the 3<sup>rd</sup> party insurance certificate of the vessel duly attested.

Place:-

Signature of the Owner / Master of the vessel

Date:-

**FORM NO. 14****(Rule 3.7.1(a))****Declaration of Ownership**

I / We \_\_\_\_\_

subject to the state of \_\_\_\_\_ residing permanently at \_\_\_\_\_

having original place of business at \_\_\_\_\_

do hereby declare that vessel named \_\_\_\_\_

was built at \_\_\_\_\_

in the year \_\_\_\_\_ and was purchased by me on \_\_\_\_\_

for rupees \_\_\_\_\_

and wish to have the same registered in my name at the port of \_\_\_\_\_ and that I am the sole owner of the same. I further declare that the vessel is intended to ply in the port of \_\_\_\_\_

**Signature of Owner**

Made and subscribed the \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_\_ by \_\_\_\_\_ the above named \_\_\_\_\_ in the presence of \_\_\_\_\_

**Signature of Magistrate / Notary Public / Registering Authority**

*Note:- The declaration shall be made before a registering Authority, a Magistrate or a Notary Public.*

**FORM No. 15****(Rule 3.7.2)****Appointment of Date and Time of Inspection of the Inland Vessel****By the Registering Authority**

Dated:

Ref. No.:

To,

The Owner / Master of the Inland Vessel

\_\_\_\_\_  
\_\_\_\_\_

Sir / Madam,

In acknowledging receipt of your application for registration of the vessel named above under Inland Vessel Act 1917 (1 of 1917) this to state that Registering Authority / Surveyor shall proceed on board the vessel at \_\_\_\_\_ hours on \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

You are requested to afford the Registration Authority / Surveyor all reasonable facilities for the registration of the Inland Vessel and all such information respecting the vessel as he may require for the purpose of registration.

Yours faithfully

**Registering Authority**

Inland Vessel

**FORM No. 16****(Rule 3.7.4)****Carving and Marking Note**

Dated :

Ref. No. :

To,

The Owner / Master of the Inland Vessel

\_\_\_\_\_  
\_\_\_\_\_

Sir / Madam

This has reference to your application for registration of above named vessel and subsequent enquiry of the vessel conducted under the provisions of section 3.8 of these rules. You advised to have the below enumerated marks carved on the vessel's hull as per the provisions of section 3.11 of these rules:-

Name of Vessel:-

Official No. \_\_\_\_\_

Port of Registry:- \_\_\_\_\_ Year of Registry: \_\_\_\_\_

You are further advised to contact this office after the completion of requisite carving (which in no case shall be greater than 15 days from the date of issue of this letter) for final inspection for the purpose of registering the vessel.

Please also be advised that you shall be required to surrender this carving note in original at the time of issuance of Certificate of Registry.

Yours faithfully

**Registering Authority**

Inland Vessels

\_\_\_\_\_



**FORM No. 17****(Rule 3.12.3)****Application for Registration of Alternation**

To,  
The Registering Authority,

\_\_\_\_\_

Sir / Madam,

I, \_\_\_\_\_

being the owner of the inland vessel named Official No. \_\_\_\_\_

hereby report that the following alterations have been carried out on the vessel:-

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

I therefore, apply for registering the alternations / the issue of a fresh Registration Certificate.

I enclose herewith a duplicate copy of treasury challan showing the deposit of the necessary fees.

I also enclose herewith the original certificate of Registration No.

Date. \_\_\_\_\_

(SIGNATURE OF THE OWNER)

**FORM No. 18****(Rule 3.13)****Application for Transfer of Registry**

To,

Registering Authority

\_\_\_\_\_

I, \_\_\_\_\_ resident of \_\_\_\_\_

\_\_\_\_\_

being the owner of an Inland Vessel name \_\_\_\_\_

official no. \_\_\_\_\_ here by request that the registry of the said vessel may

kindly be transferred from your register to the register of the Registering Authority of \_\_\_\_

\_\_\_\_\_. The certificate of registration is enclosed herewith.

The certificate of registration will be forwarded to the Registering Authority of \_\_\_\_\_

\_\_\_\_\_ on demand.

Treasury Challan for Rs. \_\_\_\_\_ is also enclosed.

Place

Date \_\_\_\_\_

SIGNATURE OF OWNER

**FORM No. 19****(Rule 3.19.2)****Appeal against Refusal to Register / Cancellation / Suspension of the  
Certificate of Registry**

Dated :

To,

The Appellant Authority,

\_\_\_\_\_

Dear Sir / Madam

This is to request your kind attention to my appeal regarding Certificate of Registry in respect of my inland vessel named \_\_\_\_\_. The required details pertaining to my case are as follows:-

1. Name of the Appellant
  2. Registering Authority passing the original Order
  3. Date of receipt of the original Order
  4. Nature of the order appealed against (specify whether the order is under section 19F, 19 N or 19 O of the Act) with No. and date of the Order
  5. Address at which the appellant undertakes to receive the notices
  6. Address to which the notice may be sent to the respondent.
  7. Relief claimed in the appeal
  8. Grounds of Appeal.
    - i)
    - ii)
    - iii)
- etc

Place:-

Signature of

Date:-

Appellant / Authorized Representative

Verification

I / We ..... the Appellant do hereby declare  
that what is stated above is true to the best of my / our knowledge, information and belief.

Dated this ..... day of .....

Signature of Appellant (s)

N. B. The appeal shall be presented in duplicate and should be accompanied by two copies (at least one of which should be the original or an attested copy) of the order appealed against.

**FORM No. 20****(Rule 3.21.8)****Instrument creating Mortgage**

Name of the Vessel \_\_\_\_\_ Official No. \_\_\_\_\_

Certificate of Registry No. \_\_\_\_\_ Place of Registry \_\_\_\_\_

Date of Registry \_\_\_\_\_

Description of the vessel (whether propelled wholly or in part by electricity, steam or other mechanical power): \_\_\_\_\_ Horse power of Engine: \_\_\_\_\_

Hull (Length for identification .....)

**Equipment:-**

| Boats | Length | Breadth | Depth |
|-------|--------|---------|-------|
| No. 1 | .....  | .....   | ..... |
| No. 2 | .....  | .....   | ..... |
| No. 3 | .....  | .....   | ..... |

Gross Registered Tonnage \_\_\_\_\_ Net Registered Tonnage \_\_\_\_\_

and described in more detail in the certificate of survey and book of registry.

I / We the undersigned **(Full Name & Address with description of mortgager or mortgagers)** in consideration of ..... this day lent to **(Full name, address and description of mortgagee. If joint mortgagees are concerned they shall be described, if the Mortgagee is a Company, the full title and address shall be given).**

**Me / Us** ..... do hereby for **Myself / ourselves** and **my / our** heirs, executors or administrators covenant with the said .....

**Firstly**, that **(Full Name & Address with description of mortgager or mortgagers)** or **my / our** heirs, executors, or administrators, will pay to the said ..... the said sum of ..... together with interest thereon at the rate of ..... percent, per annum on the **(Insert day fixed for Payment of Principal Amount)** day of ..... next.

**Secondly**, that if the said principal sum is not paid on the said day **(Full Name & Address with description of mortgager or mortgagers)** or **my / our** heirs, executors of administrators,

will during as the same or any part thereof remains unpaid, pay to the said .....  
 ..... interest on the whole or such part thereof as may for the time being  
 remain unpaid, at the rate of ..... percent per annum, by equal half-yearly payment on  
 the ..... day of ..... and ..... Day of ..... in  
 ever year; and for better securing to the said ..... the re-payment in manner aforesaid  
 of the said principal sum and interest.

*I / We* hereby mortgage to the said ..... shares of which **(Full Name & Address with  
 description of mortgager or mortgagers)** the owner in the Inland Vessel above particulars  
 described, and in her boats, and appurtenances.

**Lastly, I / We** for *myself / ourselves* and *my / our* heirs, executors or administrators covenant  
 with the said ..... and his assigns that *I / We* have power to mortgage  
 in manner aforesaid the above mentioned shares, and that the same are free from  
 encumbrance **(I any prior encumbrances add, "save as appears by the book of registration  
 of the said vessel")**.

In witness where of *I / We* have here unto subscribed *my / our* name and affixed **(full name  
 and address with description of the mortgager or mortgagers)** seal this ..... day of  
 ..... and Executed by the above named ..... in the presence of  
 Witness 1 (Name, Full Address and Signature, Seal) .....

Witness 2 (Name, Full Address and Signature, Seal) .....

**Mortgage (By Company or Body Corporate) (to secure principal sum and interest)**

Name of the Vessel \_\_\_\_\_ Official No. \_\_\_\_\_

Certificate of Registry No. \_\_\_\_\_ Place of Registry \_\_\_\_\_

Date of Registry \_\_\_\_\_

Description of the vessel (whether propelled wholly or in part by electricity, steam or other  
 mechanical power): \_\_\_\_\_ Horse power of Engine : \_\_\_\_\_

Hull (Length for identification .....)

**Equipment:-**

| Boats | Length | Breadth | Depth |
|-------|--------|---------|-------|
| No. 1 | .....  | .....   | ..... |
| No. 2 | .....  | .....   | ..... |
| No. 3 | .....  | .....   | ..... |

Gross Registered Tonnage \_\_\_\_\_ Net Registered Tonnage \_\_\_\_\_

and described in more detail in the certificate of survey and book of registry.

We, (Name in full of Company together with its principal place of business) in consideration of ..... this day lent to us by (Full name, address and description of mortgage. If joint mortgages are concerned they shall be described, if the mortgagee is a Company, the full title and address shall be given) do hereby for ourselves and our successor covenant with the said ..... and *his / theirs / its* assigns firstly, that we or our successors, will pay to the said ..... or *his / theirs / its* assigns the said sum of ..... together with interest there on at the rate of ..... percent per annum of the (Insert the day fixed for payment of principal) as above day of ..... next ; and

**Secondly**, that of the principal sum is not paid on the said day, we or our successors will, during such time as the same or any part thereof remains unpaid, pay to the said ..... or *his / theirs / its* assigns interest on the whole or such part thereof as may for the time being unpaid, at the rate of ..... percent, per annum, by equal half – yearly payments on the ..... day of ..... and day of ..... in every year, and for better securing the said ..... the repayment in manner aforesaid of the said principal sum and interest we hereby mortgage to the said ..... share / shares of which we are the Owners in the vessel above particularly described and in her boats and appurtenances.

**Lastly**, we for ourselves and our successors covenant with the said ..... and *his / theirs / its* assigns that we have power to mortgage in manner aforesaid the above mentioned shares and the same are free from encumbrances. (If any prior encumbrances add, "save as appears by the book of registration of the vessel.")

In witness where of we have hereunto affixed our common seal this ..... day of ..... and the common seal of the ..... was affixed hereunto in the presence of ..... (Description of witnesses, Directors, Secretary as the case may be)



**FORM No. 21****(Rule 3.21.9)****Instrument creating Transfer of Mortgage****By Individual or Joint Owners**

*I / We* the within – mentioned ..... son of ..... in consideration of ..... this day paid to *Me / Us* by ..... hereby transfer to *Him / Them / It* ..... the benefit of the within written security.

In witness thereof *I / We* have here-un-to subscribed *My / Our* name ..... and affixed *My / Our* seal this ..... Day of ..... and Executed by the above – named ..... in the presence of (Name, address and signature of at least two witnesses).

(By Company or Body Corporate)

The within – mentioned ..... in consideration of ..... this day paid to it by ..... hereby transfer to *Him / Them / It* the benefit of the within written security.

In witness whereof we have unto affixed out common seal this ..... day of .....

This common seal of the ..... was affixed in presence of (Signature and description of at least two witnesses, directors, secretary etc. as the case may be.)

N. B. – In the case of transfer of mortgage it shall be made by endorsement in the above forms.

**FORM No. 22****(Rule 3.21.10)****Instrument creating Discharge of Mortgage**

**In case of Mortgage is paid off, a Memorandum of its Discharge one of the following forms must be used.**

**By Individual Or Joint Owners**

Received the sum of ..... in discharge of this within written security, dated ..... day of ..... 20.....

(\*) The name and signature of at least two witnesses.

**By Companies or Body Corporate**

Received the sum of ..... in discharge of the within – written security.

In witness whereof we have here-un-to affix our common seal this ..... Day of ..... 20..... at .....

The common seal of the ..... was affixed with presence of ..... (Description and Signature of at least two witnesses i.e. Director, Secretary etc.)

**FORM NO. 23****(Rule 4.4 4.5 4.5 (a))****Application Form for appearing in Certificate of Competency**

APPLICATION FOR CERTIFICATE OF COMPETENCY TO AT AS ENGINEER /  
ENGINE DRIVER / SERANG / MASTER OF AN INLAND MECHANICALLY  
PROPELLED VESSEL.

Note:- The applicant shall submit this form duly filled in along with the necessary certificates  
to the examination center for permission to appear in the examination.

**PART – A**

## Personal particulars

- |     |                   |    |
|-----|-------------------|----|
| (1) | Name in full      | :- |
| (2) | Surname           | :- |
| (3) | Nationality       | :- |
| (4) | Permanent Address | :- |
|     |                   | :- |
|     |                   | :- |
| (5) | Date of birth     | :- |
| (6) | Place of birth    | :- |

Passport size  
photograph of the  
applicant

**PART – B**

## Particulars of all previous certificates (if any)

- |     |   |    |
|-----|---|----|
| (1) | Number  | :- |
| (2) | Competency of service   | :- |
| (3) | Grade   | :- |
| (4) | Where issued  | :- |
| (5) | Date of issue   | :- |
| (6) | Is the certificate at any time suspended or cancelled by court or authority (if yes<br>provide details) ..... |    |
|     | .....   |    |

**PART – C**

Certificate now required

- (1) Grade :-  
(2) Competency :-

**PART – D**

HAVE YOU APPEARED FOR THIS EXAMINATION EARLIER ? Yes / No.

If Yes mention year & month.

**PART – E**

Declaration to be made by applicant:-

N. B. Any person who makes, procures to be made or assists in making any false representation for the purpose of obtaining for himself, or any other person, a certificate either of competency or service, is for each offence liable to be punished for cheating under Section 420 of the Indian Penal Code and also for knowingly giving false information to the public servant under section 182 of the Indian Penal Code of 1860.

**DECLARATION**

I do hereby declare that the particulars contained in Part A, B, C, D & E of this form are correct and true to the best of my knowledge and belief, and that the papers enumerated in Part – G and sent with this form are true and genuine documents, given and signed by the persons whose names appear on them, I further declare that the statement in Part – G contains true and correct account of the whole of my services without exceptions.

Date:- .....

Signature of the Applicant

Present Address .....

.....

**PART – E****CERTIFICATE OF THE EXAMINER**

The declaration under Part – E above was signed in my presence and the fee of Rs..... received.

Date:

Examiner

**PART – G****LIST OF TESTIMONIALS AND STATEMENT OF SERVICE ON RIVERS OR SHORE OR SEA**

1. If served on board ship
  - (i) No. of testimonials / certificates (if any):-
  - (ii) Name of ship where employed:-
  - (iii) Horse power of the engine on which worked:-
  - (iv) Port of registry and official no. of the ship:-
2. Service particulars of the Applicant:-
  - (i) Capacity:-
  - (ii) Date of appointment
  - (iii) Date of termination / leaving
  - (iv) State if continuing
  - (v) Total period served
    - (a) Years:-
    - (b) Months:-
    - (c) Days:-
  - (vi) Total service
  - (vii) Total service on shore / river:-
  - (viii) Period served for which certificates are not produced:-
  - (ix) Period served for which no certificates are produced:-

**PART – H****CERTIFICATE OF THE EXAMINER**

Note:- The examiner should fill up Part – H and I and forward this form to the Chief Examiner along with the testimonials and other certificates.

1. Date and place of examination
2. Insert passed or failed against each item below:-
  - (i) In written examination:-
  - (ii) In the viva examination:-
3. Rank for which passed:-

## PART – I

## PERSONAL DESCRIPTION OF APPLICANT

1. Height:-  
Meters \_\_\_\_\_ Centimeters \_\_\_\_\_
2. Complexion:- \_\_\_\_\_
3. Personal marks or peculiarities, if any:- \_\_\_\_\_
4. Color of (a) Hair:- \_\_\_\_\_  
(b) Eyes:- \_\_\_\_\_

I hereby certify that the particulars contained in Part – H and Part – I are correct.

Date:- .....

Place:- .....

Name and signature of examiner

**FORM No. 24****(Rule 4.4, 4.5, 4.5 (a))****Medical Certificate for appearing in Certificate of Competency**

(To be filled in by a registered medical practitioner appointed for the purpose by the State Government or person authorized in this behalf by the State Government)

1. Name of applicant:-
2. Identification Marks:- (1)  
(2)
- 3 (a) Does the applicant to the best of your judgment suffer from any defect of vision ? Yes / No  
If so, has it been corrected by suitable spectacles ? Yes / No
- (b) Can the applicant to the best of your judgment readily distinguish the pigmentary colors, red and green ? Yes / No
- (c) In your opinion is he able to distinguish with his eye sight at a distance of 25 meters in good day light ? Yes / No
- (d) In your opinion does the applicant suffer from a degree of deafness which would prevent his hearing the ordinary sound signals ? Yes / No
- (e) In the opinion does the applicant suffer from night blindness ? of deformity or lose of number which would interfere with the efficient performance of his duties as a driver ? Yes / No  
If so, give your reasons in detail:-

I certify that I have personally examined the applicant .....  
..... I also certify that while examining the applicant I have directed special attention to distant vision and hearing ability the condition of the arms, legs, heads, hand joints of both extremities of the candidate and to the best of my judgment he is medically fit / not fit to hold a driving license.

The applicant is not medically fit to hold a license for the following reasons:-

Signature

1. Name and designation of the Medical  
Officer / Practitioner

(Seal)

2. Registration Number of Medical Officer

Signature or thumb impression of the Candidate

Date:-

Note:- The Medical Officer shall affix his signature over the Photograph affixed in such a manner that part of his signature is upon the photograph and part on the certificate.



**FORM No. 25****(Rule 4.4.7 & 4.5.7)****Certificate of Service**

No. :-

Name :-

Son / wife / daughter of :-

Permanent Address :-

Present Address :-

Date of Birth :-

Height :-

Marks of identification (1)

(2)

PHOTO

Signature or Left Thumb Impression

Based on assessment of your service record in Army / Navy / Coast Guard, your medical fitness certificate and the preparatory course for \_\_\_\_\_ together with the 4 basic safety course certificates, I have been found duly qualified to fulfill the duties of a \_\_\_\_\_ (Master / Serang / Engine Driver / Lascar) on an Inland mechanically propelled Vessel \_\_\_\_\_ (limitations if any), I do hereby under the provisions of the rules issued under Inland Vessels Rules, 2012 grant you the certificate of competency as a \_\_\_\_\_ (First class Master / Second class Master / Serang / Engineer / First Class Engine Driver / Second Class Engine Driver / Lascar) on an inland mechanically propelled vessel \_\_\_\_\_ (limitations if any).

Date:- .....

Place:- .....

Name and signature of Chief Examiner

**FORM No. 26****(Rule 4.4.8 & 4.5.8)****License to act as Master / Engineer of an Inland Vessel**

No. :-

Name :-

Son / wife / daughter of :-

Permanent Address :-

Present Address :-

Date of Birth :-

Height :-

Marks of identification (1)

(2)

PHOTO

Signature or Left Thumb Impression

---

Based on assessment of your service record and Master Class 2 / Engine Driver Class 1

Certificate of Competency No. \_\_\_\_\_ dated:- \_\_\_\_\_ issued date \_\_\_\_

\_\_\_\_\_ I hereby grant you this License to act as Master / Engineer of an Inland Vessel

up to \_\_\_\_\_ BHP / NHP. This License remains valid until the validity of your Master

Class 2 / Engine Driver Class 1 Certificate of Competency detailed above.

Date:- .....

Place:- .....

Name and Signature of Chief Examiner

**FORM NO. 27****(Rule 4.10)****Application Form for Revalidation of Certificate of Competency**

APPLICATION FOR REVALIDATION CERTIFICATE OF COMPETENCY TO AT AS  
ENGINEER / ENGINE DRIVER / SERANG / MASTER OF AN INLAND  
MECHANICALLY PROPELLED VESSEL.

Note:- The applicant shall submit this form duly filled in along with the necessary certificates  
/ document to the issuing authority for revalidation of certificate of competency.

**PART – A**

## Personal particulars

- |     |                   |    |
|-----|-------------------|----|
| (1) | Name in full      | :- |
| (2) | Surname           | :- |
| (3) | Nationality       | :- |
| (4) | Permanent Address | :- |
|     |                   | :- |
|     |                   | :- |
| (5) | Date of birth     | :- |
| (6) | Place of birth    | :- |

Passport size  
photograph of the  
applicant

**PART – B**

## Particulars of the certificate to be revalidated

- |     |   |    |
|-----|---|----|
| (1) | Number  | :- |
| (2) | Competency of service   | :- |
| (3) | Grade   | :- |
| (4) | Where issued  | :- |
| (5) | Date of issue   | :- |
| (6) | Is the certificate at any time suspended or cancelled by court or authority (if yes<br>provide details) ..... |    |
|     | .....   |    |

**PART – C**

Please tick the condition of revalidation being complied with by the applicant seeking revalidation.

- (1) Minimum service of 1 year in last 5 years on an inland vessel as described in section 4.10.1 of these rules.
- (2) Minimum service of 1 year in last 10 years on an inland vessel & successfully completed the preparatory course for grant of applicable grade of Certificate of Competency as described in section 4.10.2 of these rules.
- (3) Successfully completed the preparatory course for grant of applicable grade Certificate of Competency and to appear in oral examination as described in section 4.10.3 of these rules.

**PART – D**

- (1) Details of Service on Inland Vessels in last 5 / 10 years (delete the inapplicable)

| Sr. No. | Vessel Name | Vessel Identification / Official No. | Vessel BHP | Rank | From | To | Period |
|---------|-------------|--------------------------------------|------------|------|------|----|--------|
|         |             |                                      |            |      |      |    |        |

- (2) Details of Preparatory Course Attended (if applicable)

Preparatory Course Grade:- \_\_\_\_\_ Institute:- \_\_\_\_\_

From:- \_\_\_\_\_ To:- \_\_\_\_\_

Preparatory Course Certificate No. \_\_\_\_\_ Dated:- \_\_\_\_\_

**PART – E****DECLARATION**

I do hereby declare that the particulars contained in Part A, B, C, D & E of this form are correct and true to the best of my knowledge and belief, and that the papers attached / sent with this form are true and genuine documents, given and signed by the persons whose names appear on them.

Date:- .....

Signature of the Applicant

Present Address:- .....

.....

## PART – F

## CERTIFICATE OF THE EXAMINER

The declaration under Part – E above was signed in my presence and the fee of Rs.....  
received.

Date:-

Examiner

## PART – G

## CERTIFICATE OF THE EXAMINER

Note:- The examiner should fill up Part – G and H and forward this form to the Chief Examiner along with the testimonials and other certificates.

1. Date and place of Assessment of documents submitted.
2. Passed or failed in Oral Examination (if applicable)
3. Revalidation of Certificate No. \_\_\_\_\_, Grade \_\_\_\_\_ recommended / not recommended (in case of not recommended cases, please state reasons)

## PART – H

## PERSONAL DESCRIPTION OF APPLICANT

1. Height:-  
Meters \_\_\_\_\_ Centimeters \_\_\_\_\_
2. Complexion:- \_\_\_\_\_
3. Personal marks or peculiarities, if any, \_\_\_\_\_
4. Color of (a) Hair:- \_\_\_\_\_  
(b) Eyes:- \_\_\_\_\_

I hereby certify that the particulars contained in Part – G and Part – H are correct.

Date:- .....

Place:- .....

Name and signature of examiner

By order and in the name of the Governor of Gujarat,

**PRAKASH MAJMUDAR.**

Deputy Secretary to Government

-----

Government Central Press, Gandhinagar



सत्यमेव जयते

# The Gujarat Government Gazette

## EXTRAORDINARY

PUBLISHED BY AUTHORITY

Vol. LIX ] WEDNESDAY, SEPTEMBER 12, 2018/BHADRA 21, 1940

Separate paging is given to this Part in order that it may be filed as a Separate Compilation.

### PART IV-A

Rules and Orders (Other than those published in Parts I, I-A, and I-L) made  
by the Government of Gujarat under the Central Acts

#### LEGAL DEPARTMENT

#### Notification

Sachivalaya, Gandhinagar, 01<sup>st</sup> September, 2018.

#### Legal Services Authorities Act, 1987.

No. **GK/32/2018/LAC/102005/VIP-75/D:-** In exercise of the powers conferred by clause (b) of sub-section (2) of the Section 6 of the Legal Services Authorities Act, 1987 (39 of 1987), the Government of Gujarat, in consultation with Chief Justice of the High Court of Gujarat, hereby nominates Hon'ble Mr. Justice Akil Kureshi, Judge, High Court of Gujarat as an Executive Chairman, Gujarat State Legal Services Authority till His Lordship holds the office of the Judge of the High Court of Gujarat.

By order and in the name of the Governor of Gujarat,

**H. H. VARMA,**  
Deputy Secretary to Government.

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### PART IV-A

Rules and Orders (Other than those published in Parts I, I-A, and I-L) made  
by the Government of Gujarat under the Central Acts

#### WOMEN AND CHILD DEVELOPMENT DEPARTMENT

##### Notification

Sachivalaya, Gandhinagar, 5<sup>th</sup> September, 2018.

#### PROTECTION OF WOMEN FROM DOMESTIC VIOLENCE ACT-2005

**No.GS(2)-18-MHY-102010-1875(2)-A:-** In exercise of the powers conferred by section 2(t) of the protection of women from Domestic Violence Act 2005 (43 of 2005), The Government of Gujarat is pleased to cancel the recognition of Service Provider for;

- (1) Shri Manavseva Vikas Mandal, 2/34, Satyam Nagar, Nagarvir Hanuman Road, Rakhiyal, Ahmedabad, District - Ahmedabad.;
- (2) Bhagini Sahayak Gruh Udyog Sahakari Mandali, Maya Bazar, on the floor of Student Type Class, Visnagar-384315, District - Mahesana.
- (3) New India Khadi Gramodyog Charitable Trust, 13, Kaveri Plaza, Opposite Sardar Bhavan, Mill Road, Nadiad, District - Kheda.
- (4) New India Khadi Gramodyog Charitable Trust, Chhantiyavad Limdi, Near Patel Vadi, Nadiad, District - Kheda.
- (5) Vividh Kutir Udyog Mahila Sahakari Mandali Ltd., B 5, Ambavadi Society, Near Telephone Exchange, Padra, District - Vadodara.
- (6) Manav Kalyan Trust, Bhakti Nagar, Behind Police line, Opposite Tapovan Brahman Samaj Vadi, Khedbrahma, District - Sabarkantha.
- (7) Shri Bhavnagar Mahila Sangh, Vadva Washing Ghat, Bhavnagar, District - Bhavnagar.
- (8) Shri Jagruti Seva Trust, Near Munsar Darwaja, In the house of Manubhai, Near Police Chowki. Viramgam. District - Ahmedabad.

By order and in the name of the Governor of Gujarat,

**RAHUL CHHATRAPATI,**  
Deputy Secretary to Government.



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## EXTRAORDINARY

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### PART IV-A

Rules and Orders (Other than those published in Parts I, I-A, and I-L) made  
by the Government of Gujarat under the Central Acts

#### FOOD, CIVIL SUPPLIES AND CONSUMER AFFAIRS DEPARTMENT

#### NOTIFICATION

Sachivalaya, Gandhinagar, 14<sup>th</sup> September, 2018.

#### NATIONAL FOOD SECURITY ACT, 2013.

**No. GTH/2018/25/PDS/102018/175/C-1 :-** WHEREAS in exercise of the powers conferred by sub-section (3) of section 16 of the National Food Security Act, 2013 (20 of 2013) (hereinafter referred to as the “said Act”), Smt. Sangeeta Singh, I.A.S. Additional Chief Secretary was given additional charge of the Chairperson of the State Food Commission vide Government Notification, Food, Civil Supplies and Consumer Affairs Department No. GTH/2018/14/PDS/102018/175 /C-1, dated the 10<sup>th</sup> May, 2018 ;

AND WHEREAS Smt. Sangeeta Singh, I.A.S. Additional Chief Secretary has been transferred to General Administration Department vide Government Notification, General Administration Department Notification No. AIS/35.2018/24/G dated 12<sup>th</sup> July, 2018 ;

NOW THEREFORE, in exercise of the powers conferred by sub-section (3) of section 16 of the said Act, the Government of Gujarat hereby notifies that the charge of the Chairperson of the State Food Commission shall be held by Shri Kamal Dayani, I.A.S. Principal Secretary, Food, Civil Supplies and Consumer Affairs Department as additional charge.

By order and in the name of the Governor of Gujarat,

**KISHORKUMAR S. RANA,**  
Under Secretary to Government.

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## **PART IV-A**

**Rules and Orders (Other than those published in Parts I, I-A, and I-L) made  
by the Government of Gujarat under the Central Acts**

### **PORTS AND TRANSPORT DEPARTMENT NOTIFICATION**

Sachivalaya, Gandhinagar, 12<sup>th</sup> September, 2018.

#### **MOTOR VEHICLES ACT, 1988**

**NO.GG/16/2018/STC/I0/2008/1479/GH :-** In exercise of the powers conferred by sub-section(2) of section 89 of the Motor Vehicles Act, 1988, (Act 59 of 1988) and in supersession of Government Notification, Ports and Transport Department No.GG/03/2016/STC/102008/1479/GH dated the 6<sup>th</sup> February, 2016, the Government of Gujarat hereby constitutes for the State of Gujarat, the State Transport Appellate Tribunal which shall consist of Ms. N.P.Syed, Honourable Judge, City Civil Court, Ahmedabad and also hereby appoints Mrs. P.C.Chauhan, Honourable Judge, City Civil Court, Ahmedabad to work as State Transport Appellate Tribunal in the absence of Ms. N.P.Syed on leave or otherwise,

By order and in the name of the Governor of Gujarat,

**PRAKASH MAJMUDAR,**

Deputy Secretary to Government.

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## EXTRAORDINARY

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### PART IV-A

Rules and Orders (Other than those published in Parts I, I-A, and I-L) made  
by the Government of Gujarat under the Central Acts

#### LEGAL DEPARTMENT

#### Notification

Sachivalaya, Gandhinagar, 20<sup>th</sup> September, 2018.

#### The Commission of Inquiry Act, 1952.

**No.GK/40/2018/COI/102017/49/A :- WHEREAS**, the Government has under Government Notification legal Department No.GK/15/2017/COI/ 102017/49/A dated 16<sup>th</sup> march, 2017 appointed a Commission of Inquiry under section 3 of the commission of Inquiry act, 1952 (60 of 1952) to inquire in to a complaint in the incidents of rape, alleged to have been committed at various places, on a young woman of District Kutchch, during the period from August, 2015 to November, 2016 Which came to be registered with Nalia Police Station, vide ICR. No. 03/2017, District Kutchch on 25/01/2017 under Sections 354, 376, 365, 328, 343 and 120B of the Indian Penal Code.

**AND WHEREAS** the Commission was required to complete the inquiry and submit its report on "as soon as possible, but not later than three months from the date of its first sitting." as provided in the aforesaid notification of 16<sup>th</sup> march, 2017 and thereafter within the time limit extended till On or before the 30<sup>th</sup> September, 2018 as provided in the subsequent notifications;

**AND WHEREAS** the said Commission is not likely to complete the inquiry and submit its report into the said matter to the State Government till Now;

**AND WHEREAS** the said Commission has requested the government to extend its time limit up to 31st March, 2019 and the Government of Gujarat is of the opinion that the Commission should complete the inquiry and submit its report to the state Government on or before the 31<sup>st</sup> December, 2018;

**NOW, THEREFORE**, in exercise of the powers conferred by Section 3 of the Commissions of Inquiry Act, 1952 (60 of 1952), the Government of Gujarat hereby amends the

Government Notification, legal Department No.GK/15/2017/COI/ 102017/49/A dated 16<sup>th</sup> march, 2017 as follow a namely:-

In the said notification, in paragraph 3, for words, figures and letters "**on or before the 30<sup>th</sup> September, 2018.**" the words, figures and letters "**on or before the 31<sup>st</sup> December, 2018.**" shall be substituted.

By order and in the name of the Governor of Gujarat,

**C. H. SHAH,**

Joint Secretary to Government.

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#### PART IV-A

**Rules and Orders (Other than those published in Parts I, I-A, and I-L) made by the Government of Gujarat under the Central Acts**

#### FOOD, CIVIL SUPPLIES AND CONSUMER AFFAIRS DEPARTMENT NOTIFICATION

Sachivalaya, Gandhinagar, 17<sup>th</sup> September, 2018.

**No. GTH/24-A/KMV/102018/685095/D.-** In exercise of the power conferred by Subsection (3) of Section-14 of the Legal Metrology Act-2009, The Government of Gujarat hereby specifies the jurisdiction and local limits of Sr./Jr. Inspector of Legal Metrology as mention below in Column No-4 to act as designation given in Column-3 for the purpose of enforcement of the the Rules made there under and The Gujarat Legal Metrology (Enforcement) Rules-2011.

Sr./Jr. Inspector of Legal Metrology mention in Column-3 shall exercise such powers and discharge the such functions in respect of their New jurisdiction as mention in Column-(7) of the Schedule.As per Division mention in Column (6)

| District | Sr. No. | Division                             | Field of operation   | Sr. No. | Division                        | Field of operation   |
|----------|---------|--------------------------------------|--|---------|---------------------------------|--|
| (1)      | (2)     | (3)                                  | (4)  | (5)     | (6)                             | (7)  |
|          |         | Senior Inspector, Rajkot Division- 1 | Work of tanker calibration registered at Rajkot, Amreli, Bhavnagar and Botad District R.T.O. office and new goods. | 1       | Senior Inspector, Rajkot, Dn.-1 | Work of tanker calibration and new goods.  |
|          |         |                                      |  | 2       | Junior Inspector, Rajkot Dn.- 2 | Work of tanker calibration and new goods.  |
|          | 2       | Junior Inspector, Rajkot Dn.2        | Work of ward Nos. 7, 8, 9, 10, 11, 13, 14, 16, 17 of Rajkot Municipal Corporation and Padadhari Taluka             | 3.      | Junior Inspector, Rajkot Dn. 3  | Work of ward Nos. 7, 8, 9, 10, 11, 13, 14, 16, 17 of Rajkot Municipal Corporation and Padadhari Taluka |

| District         | Sr. No. | Division                         | Field of operation  | Sr. No. | Division                                | Field of operation  |
|------------------|---------|----------------------------------|---|---------|---|---|
| (1)              | (2)     | (3)                              | (4)   | (5)     | (6)                                     | (7)   |
|                  | 3       | Junior Inspector, Rajkot Dn. 3   | Work of Ward No. <sup>1</sup> 1,2, 3,4,5, 6 and 15 of Rajkot Municipal Corporation. | 4       | Junior Inspector, Rajkot Dn. 4          | Work of Ward No. 1, 2, 3, 4, 5, 6 and 15 of Rajkot Municipal Corporation.             |
|                  | 4       | Junior Inspector, Rajkot Dn. 4   | Work of ward No. 12, 18 of Rajkot Municipal Corporation and Rajkot Taluka (Rural)   | 5       | Junior Inspector, Rajkot No. 5          | Work of ward No. 12, 18 of Rajkot Municipal Corporation and Rajkot Taluka (Rural)     |
|                  | 5       | Junior Inspector, Dhoraji Dn. 1  | Work of Dhoraji and Upleta Taluka   | 6       | Junior Inspector, Dhoraji               | Work of Dhoraji, Upleta, Jetpur, Jamkandorna. Taluka                                  |
|                  | 6       | Junior Inspector, Dhoraji Dn. 2  | Work of Jetpur and Jamkandorna Taluka   |         |   |   |
|                  | 7       | Junior Inspector, Gondal Dn. 1   | Work of Gondal, Lodhika and Kotda Sangani Taluka,                                   | 7       | Junior Inspector, Gondal Dn. 1          | Work of Gondal, Lodhika and Kotda Sangani Taluka.                                     |
| Rajkot           | 8       | Junior Inspector, Gondal Dn. 2   | Work of Vinchhia and Jasadan Taluka   | 8       | Junior Inspector, Gondal Dn. 2          | Work of Vinchhia and Jasadan Taluka   |
| Morbi            | 9       | Junior Inspector, Morbi          | Morbi Tankara Work of Malia Miyana, Vankaner and Halvad Taluka                      | 9       | Senior Inspector, Morbi. Dn. 1          | Work of new goods in Morbi District & stamping work of Malia Miyana and Morbi taluka. |
|                  |         |                                  |   | 10      | Junior Inspector, Morbi Dn. 2           | Work of Halvad, Vankaner and Tankara Taluka   |
| Dev Bhumi Dwarka | 10      | Junior Inspector, Jam Khambhalia | Work of Jam Khambhalia, Okha MandaI,(Okha) Jam Khamkalyanpur and Bhanvad Taluka     | 11      | Junior Inspector, Jam Khambhalia Dn. 1  | Work of Jam Khambhalia Taluka   |
|                  |         |                                  |   | 12      | Junior Inspector, Jam Khambhalia, Dn. 2 | Work of Okhamandal (Okha) Jam Kalyanpur and Bhanvad Taluka                            |
|                  | 11      | Senior Inspector, Jamnagar Dn.1  | Work of Tanker Caliberation, New goods and ward No. 1 to 10 of Jamnagar City.       | 13      | Senior Inspector, Jamnagar Dn. 1        | Work of Tanker Caliberation, New goods and ward No. 1 to 10 of Jamnagar City.         |
|                  | 12      | Junior Inspector, Jamnagar Dn. 2 | Work of Jamnagar Taluka except Jamnagar City  | 14      | Junior Inspector, Jamnagar Dn. 2        | Work of Jamnagar (Rural)  |
|                  |         |                                  |   | 15      | Junior Inspector, Jamnagar Dn. 3        | Reliance Industries of Jamnagar Taluka  |

| District     | Sr. No. | Division                         | Field of operation  | Sr. No. | Division                          | Field of operation  |
|--------------|---------|----------------------------------|---|---------|-----------------------------------|---|
| (1)          | (2)     | (3)                              | (4)   | (5)     | (6)                               | (7)   |
|              | 13      | Junior Inspector, Jamnagar Dn. 3 | Work of ward No. 11 to 16 of Jamnagar city and Dhrol and Jodia Taluka | 16      | Junior Inspector, Jamnagar Dn.4   | Work of ward No. 11 to 16 of Jamnagar city and Dhrol and Jodia Taluka |
| Jamnagar     | 14      | Junior Inspector, Jamjodhpur     | Work of Jamjodhpur, Kalavada and Lalpur Taluka                        | 17      | Junior Inspector, Jamjodhpur      | Work of Jamjodhpur, Kalavad and Lalpur Taluka                         |
|              | 15      | Junior Inspector, Adipur Dn. 1   | Work of Anjar, Gandhidham, Bhachau and Rapar Taluka                   | 18      | Junior Inspector, Gandhidham      | Work of Gandhidham Taluka   |
|              |         |                                  |   | 19      | Junior inspector, Anjar           | Work of Anjar Taluka  |
|              |         |                                  |   | 20      | Junior Inspector, Rapar           | Work of Bhachau and Rapar Taluka                                      |
|              | 16      | Junior Inspector, Adipur Dn. 2   | Work of Tanker Caliberation   | 21      | Senior Inspector, Adipur Dn. 1    | Work of Tanker Celiberaion  |
|              |         |                                  |   | 22      | Junior Inspector, Adipur Dn. 2    | Work of Tanker Celiberaion  |
|              |         |                                  |   | 23      | Junior Inspector, Adipur Dn. 3    | Work of Tanker Celiberaion  |
|              | 17      | Junior Inspector, Mandvi         | Work of Mandvi, Mundra and Abdasa Taluka                              | 24      | Junior Inspector, Abdasa          | Work of Abdasa Taluka   |
|              |         |                                  |   | 25      | Junior Inspector, Mandvi          | Work of Mandvi Taluka   |
|              |         |                                  |   | 26      | Junior Inspector, Mundra          | Work of Mundra Taluka   |
| Kutchh       | 18      | Junior Inspector, Bhuj           | Work of Bhuj. Lakhpat and Nakhatrana Taluka                           | 27      | Junior Inspector, Bhuj            | Work of Bhuj Taluka   |
|              |         |                                  |   | 28      | Junior Inspector, Nakhatrana      | Work of Lakhpat and Nakhatrana Taluka                                 |
| Banas-kantha | 19      | Junior Inspector, Diyodar :      | Work of Kankrej, Bhabhar, Diyodar, Vav, Tharad and Suigam Taluka      | 29      | Junior Inspector, Diyodar:        | Work of Kankrej, Bhabhar, Diyodar, Vav, Tharad and Suigam Taluka      |
|              | 20      | Junior Inspector Disa            | Work of Disa, Dhanera, Dantivada and Lakhani Taluka                   | 30      | Junior Inspector, Disa            | Work of Disa, Dhanera, Dantivada and Lakhani Taluka                   |
|              | 21      | Junior Inspector, Palanpur       | Work of Palanpur, Danta, Vadgam and Amirgadh Taluka                   | 31      | Senior Inspector, Palanapur Dn. 1 | Work of Palanpur Taluka   |
|              |         |                                  |   | 32      | Junior Inspector, Palanpur, Dn. 2 | Work of Danta, Vadgam and Amirgadh Taluka                             |

| District  | Sr. No. | Division                          | Field of operation  | Sr. No. | Division                          | Field of operation   |
|-----------|---------|-----------------------------------|---|---------|-----------------------------------|--|
| (1)       | (2)     | (3)                               | (4)   | (5)     | (6)                               | (7)  |
| Ahmedabad | 22      | Senior Inspector, Ahmedabad Dn. 1 | Work of Tanker Caliberation of Ahmedabad, Gandhinagar, Surendranagar, Sabarkantha and Bhavnagar District. | 33      | Senior Inspector, Ahmedabad Dn. 1 | Work of Tanker Caliberation.   |
|           | 23      | Senior Inspector, Ahmedabad Dn. 2 | Work of New goods from main railway line to western side and Gandhinagar District.                        | 34      | Junior Inspector, Ahmedabad DN. 2 | Work of ward No. 25, 26 and 27 of Ahmedabad Municipal Corporation and new goods of said wards. |
|           |         |                                   |   | 35      | Junior Inspector, Ahmedabad Dn. 3 | Work of ward No. 11, 13 & 14 of Ahmedabad Municipal Corporation and New goods of said wards.   |
|           |         |                                   |   | 36      | Junior Inspector, Ahmedabad Dn. 4 | Work of ward No. 2 and 5 of Ahmedabad Municipal Corporation and new goods of said wards.       |
|           | 24      | Senior Inspector, Ahmedabad Dn. 3 | Work of New goods of area from main railway line to eastern side.   | 37      | Junior Inspector, Ahmedabad Dn. 5 | Work of ward No. 6 & 9 of Ahmedabad Municipal Corporation and new goods of said wards.         |
|           |         |                                   |   | 38      | Junior Inspector, Ahmedabad Dn.6  | Work of ward No. 3 & 4 of Ahmedabad Municipal Corporation and new goods of said wards.         |
|           |         |                                   |   | 39      | Junior Inspector, Ahmedabd Dn. 7  | Work of ward No. 32 & 33 of Ahmedabad Municipal Corporation and new goods of said wards.       |
|           |         |                                   |   | 40      | Junior Inspector, Ahmedabad Dn. 8 | Work of ward No. 41, 42 & 43 of Ahmedabad Municipal Corporation and new goods of said wards.   |

| District | Sr. No. | Division                          | Field of operation  | Sr. No. | Division                           | Field of operation   |
|----------|---------|-----------------------------------|---|---------|------------------------------------|--|
| (1)      | (2)     | (3)                               | (4)   | (5)     | (6)                                | (7)  |
|          | 25      | Junior Inspector, Ahmedabad Dn. 4 | Work of ward No. 28,36,30,21 and 29 of Ahmedabad Municipal Corporation.       | 41      | Junior Inspector, Ahmedabad Dn. 9  | Work of ward No. 28, 29 & 30 of Ahmedabad Municipal Corporation and new goods of said wards.   |
|          | 26      | Junior Inspector, Ahmedabad Dn. 5 | Work of ward No. 11, 12, 13, 14,23 and 24 of Ahmedabad Municipal Corporation. | 42      | Junior Inspector, Ahmedabad Dn. 10 | Work of ward No. 12, 23 and 24 of Ahmedabad Municipal Corporation and new goods of said wards. |
|          | 27      | Junior Inspector, Ahmedabad Dn. 6 | Work of ward No. 35, 37, 44, 45 and 46 of Ahmedabad Municipal Corporation.    | 43      | Junior Inspector, Ahmedabad Dn. 11 | Work of ward No. 36, 37 & 44 of Ahmedabad Municipal Corporation and new goods of said wards.   |
|          |         |                                   |   | 44      | Junior Inspector, Ahmedabad Dn. 12 | Work of ward No. 35, 45 & 46 of Ahmedabad Municipal Corporation and new goods of said wards.   |
|          | 28      | Junior Inspector, Ahmedabad Dn.7  | Work of ward No. 1,2,5,6, 7,9, 10 and 18 of Ahmedabad Municipal Corporation.  | 45      | Junior Inspector, Ahmedabad Dn. 13 | Work of ward No. 1 & 7 of Ahmedabad Municipal Corporation and new goods of said wards.         |
|          |         |                                   |   | 46      | Junior Inspector, Ahmedabad Dn. 14 | Work of ward No. 10 & 18 of Ahmedabad Municipal Corporation and new goods of said wards.       |
|          | 29      | Junior Inspector, Ahmedabad Dn.8  | Work of ward No. 3,4, 15, 16 and 17 of Ahmedabad Municipal Corporation.       | 47      | Junior Inspector, Ahmedabad Dn. 15 | Work of ward No. 15, 16 17 &21 of Ahmedabad Municipal Corporation and new goods of said wards. |



| District | Sr. No. | Division                           | Field of operation  | Sr. No. | Division                           | Field of operation   |
|----------|---------|------------------------------------|---|---------|------------------------------------|--|
| (1)      | (2)     | (3)                                | (4)   | (5)     | (6)                                | (7)  |
|          | 30      | Junior Inspector, Ahmedabad Dn.9   | Work of ward No. 22,25,26,27,38 and 39 of Ahmedabad Municipal Corporation.        | 48      | Junior Inspector, Ahmedabad Dn. 16 | Work of ward No. 22, 38, & 39 of Ahmedabad Municipal Corporation and new goods of said wards.                  |
|          | 31      | Junior Inspector, Ahmedabad Dn. 11 | Work of ward No. 8, 19, 20, 31, 32, 33 and 34 of Ahmedabad Municipal Corporation. | 49      | Junior Inspector, Ahmedabad Dn. 17 | Work of ward No. 8,19 & 20 of Ahmedabad Municipal Corporation and new goods of said wards.                     |
|          |         |                                    |   | 50      | Junior Inspector, Ahmedabad Dn. 18 | Work of ward No.31 & 34 of Ahmedabad Municipal Corporation and new goods of said wards.                        |
|          | 32      | Junior Inspector, Ahmedabad Dn. 12 | Work of ward No. 40 of Ahmedabad Municipal Coporation and Daskroi Taluka.         | 51      | Junior Inspector, Ahmedabad Dn. 19 | Work of ward No. 40 of Ahmedabad Municipal Corporation and Daskroi Taluka and new goods of said ward & Taluka. |
|          | 33      | Junior Inspector. Ahmedabad Dn. 13 | Work of ward No. 41,42, 43,47 and 48 of Ahmedabad Municipal Coporation.           | 52      | Junior Inspector, Ahmedabad Dn. 20 | Work of ward No.47 & 48 of Ahmedabad Municipal Corporation and new goods of said wards.                        |
|          | 34      | Junior inspector, Dholka           | Work of Dholka, Dhandhuka, Dholera and Bavla Taluka                               | 53      | Junior Inspector, Dholka           | Work of Dholka, Dhandhuka & Dholera Taluka & new goods of said Talukas,  |
|          |         |                                    |   | 54      | Junior Inspector, Bavla            | Work of Bavla Taluka and new goods of said taluka.   |
|          | 35      | Junior Inspector, Viramgam         | Work of Viramgam, Mandal, Detroj & Sanand Taluka.                                 | 55      | Junior Inspector, Viramgam         | Work of Viramgam and new good of said Taluka   |
|          |         |                                    |   | 56      | Junior Inspector, Detroj           | Work of Detroj & Mandal Taluka and New goods of said Taluka  |
|          |         |                                    |   | 57      | Junior Inspector, Sanand           | Work of Sanand Taluka and New goods of said Taluka.  |

| District     | Sr. No. | Division                       | Field of operation  | Sr. No. | Division                            | Field of operation   |
|--------------|---------|--------------------------------|---|---------|-------------------------------------|--|
| (1)          | (2)     | (3)                            | (4)   | (5)     | (6)                                 | (7)  |
| Ahmedabad    | 36      | Junior Inspector, Caliberation | Work of rickshaw, taxi metre caliberation   | 58      | Senior Inspector, Ahmedabad Dn.21   | Rickshaw, taxi meter caliberation of Ahmedabad R.T.O. office series GJ-01 & new goods Rickshaw, taxi meter.            |
|              |         |                                |   | 59      | Junior Inspector, Ahmedabad Dn.22   | Work of Vastral R.T.O. office series GJ-27 Rickshaw, taxi metre caliberation.  |
| Gandhi nagar | 37      | Junior Inspector, Gandhinagar  | Work of Gandhinagar city and Taluka and Dahegam Taluka  | 60      | Senior Inspector, Gandhinagar Dn. 1 | Work of Gandhinagar City/Taluka and new goods of Gandhinagar Taluka.   |
|              |         |                                |   | 61      | Junior Inspector, Gandhinagar Dn.2  | Work of Dahegam and Mansa Talukas & new goods of said Talukas.   |
| Gandhi nagar | 37      | Junior Inspector, Kalol        | Work of Kalol and Mansa Taluka  | 62      | Junior inspector Kalol              | Work of Kalol Taluka & new goods of said Taluka.   |
| Kheda        | 38      | Junior inspector, Nadiad, Dn.1 | Work of areas of Municipality ward No. 1 and 3 to 12 and 13 of Nadiad City.   | 63      | Junior Inspector, Nadiad            | Work of Nadiad City and Taluka and Vaso, Matar Taluka -and Kheda/ Anand District new goods Work. & Tanker caliberation |
|              | 39      | Junior Inspector, Nadiad, Dn.2 | Work of area of Municipality ward No. 2 of Nadiad city and Vaso and Matar and Nadiad (rural) and work of Tanker of Kheda/ Anand District. |         |                                     |  |
|              | 40      | Junior Inspector, Thasara      | Work of Thasara, Mahudha and Galteswar Taluka   |         |                                     |  |
|              | 41      | Junior Inspector, Kapadvanj    | Work of Kapadvanj and Kathlal Taluka  | 64      | Junior Inspector, Kapadvanj         | Work of Thasara, Mahudha, Galteswar, Kapadvanj and Kathlal Taluka.   |
|              | 42      | Junior Inspector, Kheda        | Work of Kheda and Mahemdavad Taluka   | 65      | Junior Inspector, Kheda             | Work of Kheda and Mahemdavad Taluka  |

| District | Sr. No. | Division                          | Field of operation   | Sr. No. | Division                          | Field of operation   |
|----------|---------|-----------------------------------|--|---------|-----------------------------------|--|
| (1)      | (2)     | (3)                               | (4)  | (5)     | (6)                               | (7)  |
| Anand    | 43      | Senior Inspector, Anand           | Work of Anand City and Taluka  | 66      | Senior Inspector, Anand           | Work of Anand City and Taluka  |
|          | 44      | Junior Inspector, Borsad          | Work of Borsad, Ankla and Umreth Taluka                                  | 67      | Junior Inspector, Borsad          | Work of Borsad, Ankla and Umreth Taluka.                                 |
|          | 45      | Junior Inspector, Petlad          | Work of New goods and Petlad and Sojitra Taluka                          | 68      | Junior Inspector Petlad           | Work of New goods, Petlad, Sojitra, Khambhat and Tarapur Taluka.         |
|          | 46      | Junior Inspector, Khambhat        | Work of Khambhat and Tarapur Taluka                                      |         |                                   |  |
| Vadodara | 47      | Senior Inspector, Vadodara Dn. 1  | Work of Tanker Caliberation  | 69      | Senior Inspector, Vadodara Dn.1   | Work of Tanker Caliberation  |
|          |         |                                   |  | 70      | Junior Inspector, Vadodara Dn.2   | Work of Tanker Caliberation  |
|          | 48      | Junior Inspector, Vadodara Dn.2   | Work of new goods and Gujarat Refinery                                   | 71      | Junior Inspector, Vadodara Dn.3   | Work of New goods  |
|          | 49      | Junior Inspector, Vadodra Dn.3    | Work of Tanker Caliberation  | 72      | Junior Inspector, Vadodara Dn. 4  | Work of Gujarat Refinery   |
|          |         |                                   |  | 73      | Junior Inspector, Vadodara Dn. 5  | Work of Tanker Caliberation  |
|          | 50      | Junior Inspector, Vadodara Dn. 4  | Work of ward No. 11,12, 18 and 19 of Vadodara Municipal Corporation      | 74      | Junior Inspector, Vadodara Dn.6   | Work of ward No. 11, 12, 18 and 19 of Vadodara Municipal Corporation     |
|          | 51      | Junior Inspector, Vadodara, Dn. 5 | Work of Ward No. 13, 14, 15, 16 and 17 of Vadodara Municipal Corporation | 75      | Junior Inspector, Vadodara Dn. 7  | Work of Ward No. 13, 14, 15, 16 and 17 of Vadodara Municipal Corporation |
|          | 52      | Junior Inspector, Vadodara Dn. 6  | Work of ward No. 1, 8, 9 and 10 of Vadodara Municipal Corporation        | 76      | Junior Inspector Vadodara Dn. 8   | Work of ward No. 1,8, 9 and 10 of Vadodara Municipal Corporation         |
|          | 53      | Junior Inspector, Vadodara No. 7  | Work of Padra, Savli Taluka and Rural area of Vadodara Taluka            | 77      | Junior Inspector, Vadodara Dn. 9  | Work of Padra and Savli Taluka   |
|          |         |                                   |  | 78      | Junior Inspector, Vadodara Dn. 10 | Work of Rural area of Vadodara Taluka                                    |
|          | 54      | Junior Inspector, Vadodara Dn. 8  | Work of ward No. 2,3, 4, 5,6 and 7 of Vadodara Municipal Corporation     | 79      | Junior Inspector, Vadodara Dn. 11 | Work of ward No. 2, 3, 4, 5, 6 and 7 of Vadodara Municipal Coropration   |

| District      | Sr. No. | Division  | Field of operation  | Sr. No. | Division  | Field of operation  |
|---------------|---------|---|---|---------|---|---|
| (1)           | (2)     | (3)   | (4)   | (5)     | (6)   | (7)   |
|               | 55      | junior Inspector, Dabhoi                                  | Work of Vaghodia, Dabhoi, Desar, Karjan and Sinor Taluka  | 80      | Junior Inspector, Dabhoi                                  | Work of Vaghodia, Dabhoi, Desar, Karjan and Sinor Taluka.                     |
| Chhota Udepur | 56      | junior Inspector, Chhota Udepur (TSP)                     | Work of Chhota Udepur, Pavi Jetpur and Bodeli Taluka  | 81      | Junior Inspector, Chhota Udepur, (TSP)                    | Work of Chhota Udepur, Pavi Jetpur and Bodeli Taluka                          |
|               | 57      | Junior Inspector, Nasvadi (TSP)                           | Work of Nasvadi, Qwant and Sankheda Taluka  | 82      | Junior Inspector, Nasvadi,(TSP)                           | Work of Nasvadi, Qwant and Sankheda Taluka                                    |
| Bharuch       | 58      | Junior Inspector, Bharuch Dn. 1                           | Work of Ankleswar Taluka  | 83      | Senior Inspector, Bharuch Dn. 1                           | Work of Ankleswar GIDC  |
|               |         |   |   | 84      | Junior Inspector, Bharuch Dn. 2                           | Work of Taluka except Ankleswear GIDC.  |
|               | 59      | Junior Inspector, Bharuch Dn. 2                           | Work of Bharuch city and Taluka and Hansot Taluka   | 85      | Junior Inspector, Bharuch Dn. 3                           | Workof Bharuch city and Taluka and Hansot Taluka                              |
|               | 60      | Junior Inspector, Jambusar                                | Work of Jambusar Amod and Vagra Taluka  | 86      | Junior Inspector, Jambusar                                | Work of Jambusar Taluka   |
|               |         |   |   | 87      | Junior Inspector, Amod                                    | Work of Amod Taluka   |
|               |         |   |   | 88      | Junior Inspector, Vagra                                   | Work of Vagra Taluka  |
|               | 61      | Junior Inspector, Rajpipla (now Junior Inspector Zagadia) | Work of Zagadia Valia and Netrang Taluka  | 89      | Junior Inspector, Rajpipla (now Junior Inspector Zagadia) | Work of Zagadia Valia and Netrang Taluka                                      |
| Narmada       | 62      | Junior Inspector, Dediapada (TSP)                         | Work of Dediapada and Sagbara Taluka  | 90      | Junior Inspector, Dediapada (TSP)                         | Work of Dediapada, Sagbara, Rajpipla, Tilakvada and Garudeswar Taluka         |
|               | 63      | Senior Inspector, Rajpipla                                | Workof Rajpipla (Nadod) Garudeswar and Tilakwada  |         | As above  | As above  |
| Surat         | 64      | Senior Inspector, Surat -Dn.1                             | Work of all tanker caliberation of Surat District and ward 27 and 29 of Surat Municipal Corporation | 91      | Senior Inspector Surat - Dn. 1                            | Work of tanker caliberation and ward 27 and 29 of Surat Municipal Corporation |
|               | 65      | Junior Inspector, Surat Dn.2                              | Work of Ward No. 2,5, 6, 7, 8, 10 and 11 of Surat Municipal Corporation                             | 92      | Junior Inspector, Surat Dn.2                              | Work of Ward No. 2,5,6,7, 8, 10 and 11 of Surat Municipal Corporation         |

| District | Sr. No. | Division                         | Field of operation   | Sr. No. | Division                          | Field of operation  |
|----------|---------|----------------------------------|--|---------|-----------------------------------|---|
| (1)      | (2)     | (3)                              | (4)  | (5)     | (6)                               | (7)   |
|          | 66      | Junior Inspector, Surat Dn.3     | Work of Ward No. 1,9, 20,21,22, 23, 24 and 28 of Surat Municipal Corporation                   | 93      | Junior Inspector, Surat Dn.3      | Work of Ward No. 1,9, 20,21,22, 23, 24 and 28 of Surat Municipal Corporation                  |
|          | 67      | Junior Inspector, Surat Dn.4     | Work of Ward No. 3,4, 12, 13, 14, 15, 16, 17, 18, 19, 25 and 26 of Surat Municipal Corporation | 94      | Junior Inspector, Surat Dn.4      | Work of Ward No. 3,4, 12, 13, 14, 15, 16, 17, 18, 19,25 and 26 of Surat Municipal Corporation |
|          | 68      | Junior Inspector, Surat Dn.5     | Work of Chaurasi Taluka (except area of Surat Municipal Corporation)                           | 95      | Junior Inspector, Surat Dn.5      | Work of Chaurasi Taluka (except area of Surat Municipal Corporation)                          |
|          | 69      | Junior Inspector Surat Dn.6      | Work of Bardoli, Kamrej, Palsana and Mahuva Taluka   | 96      | Junior Inspector, Surat Dn.6      | Work of Bardoli and Mahuva Taluka   |
|          |         |                                  |  | 97      | Junior Inspector, Surat Dn.7      | Work of Kamrej, Palsana and Mandavi Taluka  |
|          | 70      | Junior Inspector, Mandvi         | Work of Mandvi, Mangrol, Umarpada and Olpad Taluka   | 98      | Junior Inspector, Mandvi          | Work of Mangrol, Umarpada and Oldpad Taluka   |
|          | 71      | Junior Inspector, Calibration    | Work of all new goods of Surat District  | 99      | Junior Inspector, Surat Dn. 8     | Work of all new goods of Surat District   |
| Tapi     | 72      | Junior Inspector, Vyara          | Work of Vyara, Songadh, Valod, Uchchhal and Nizar Taluka                                       | 100     | Junior Inspector, Vyara           | Work of Vyara, Songadh, Valod, Uchchhal and Nizar Taluka                                      |
| Valsad   | 73      | Junior Inspector, Valsad Dn. 1   | Work of Umargam Taluka   | 101     | Junior Inspector, Valsad Dn. 1    | Work of Umargam Taluka  |
|          | 74      | Junior Inspector, Valsad Dn. 2   | Work of Valsad City and Taluka   | 102     | Junior Inspector, Valsad Dn. 2    | Work of Valsad City and Taluka  |
|          | 75      | Junior Inspector, Vapi           | Work of Vapi Taluka  | 103     | Junior Inspector, Vapi Dn. 1      | Work of Taluka except Vapi GIDC   |
|          |         |                                  |  | 104     | Junior Inspector, Vapi Dn. 2      | Work of Vapi GIDC   |
|          | 76      | Junior Inspector, Dharampur(TSP) | Work of Dharampur Kaprada, Pardi Taluka  | 105     | Junior Inspector, Dharampur (TSP) | Work of Dharampur Kaprada, Pardi Taluka   |
| Navsari  | 77      | Senior Inspector, Navsari Dn. 1  | Work of Navsari City and Taluka  | 106     | Senior Inspector, Navsari Dn. 1   | Work of Navsari City and Taluka   |
|          | 78      | Junior Inspector, Navsari Dn. 2  | Work of Chikhali and Vansda Taluka   | 107     | Junior Inspector, Navsari Dn. 2   | Work of Chikhali and Vansda Taluka  |

| District       | Sr. No. | Division                           | Field of operation   | Sr. No. | Division                           | Field of operation  |
|----------------|---------|------------------------------------|--|---------|------------------------------------|---|
| (1)            | (2)     | (3)                                | (4)  | (5)     | (6)                                | (7)   |
|                | 79      | Junior Inspector, Bilimora         | Work of Jalalpor, Gandevi and Khergam Taluka   | 108     | Junior Inspector, Bilimora         | Work of Jalalpor, Gandevi and Khergam Taluka  |
| Dang           | 80      | Junior Inspector, Ahva (TSP)       | Work of Ahwa, Subir and Vaghai Taluka  | 109     | Junior Inspector, Ahwa (TSP)       | Work of Ahwa, Subir and Vaghai Taluka   |
| Arvali         | 81      | Junior Inspector, Modasa           | Work of Modasa, Dhansura, Malpur, Bayad and Meghraj Taluka   | 110     | Junior Inspector, Modasa           | Work of Modasa, Dhansura, Malpur, Bayad, Bhiloda and Meghraj Taluka                                 |
| Sabarkantha    | 82      | Junior Inspector, Himatnagar       | Work of Himmatnagar, Prantij and Talod Taluka  | 111     | Senior Inspector, Himatnagar       | Work of Himmatnagar, Prantij and Talod Taluka   |
|                | 83      | Junior inspector, Idar             | Work of Idar and Vadali Taluka   | 112     | Junior Inspector, Idar             | Work of Idar and Vadali Taluka  |
|                | 84      | Junior Inspector, Khedbrahma (TSP) | Work of Poshina, Khedbrahma and Vijaynagar Taluka  | 113     | Junior Inspector, Khedbrahma (TSP) | Work of Poshina, Khedbrahma and Vijaynagar Taluka   |
| Bhavnagar      | 85      | Senior Inspector, Bhavnagar Dn. 1  | Work of ward No. 1,2, 7,8,9,10 of Bhavnagar City and Ghogha Taluka                                 | 114     | Senior Inspector, Bhavnagar Dn. 1  | Work of ward No. 1,2, 7, 8,9, 10 of Bhavnagar City and Ghogha Taluka                                |
|                | 86      | Junior Inspector, Bhavnagar Dn. 2  | Work of Ward No.3,4, 5,6, 11, 12, 13 of Bhavnagar City and Bhavnagar Taluka and Vallabhipur Taluka | 115     | Junior Inspector, Bhavnagar Dn. 2  | Work of Ward No.3,4, 5, 6, 11, 12, 13 of Bhavnagar City and Bhavnagar Taluka and Vallabhipur Taluka |
|                | 87      | Junior Inspector, Mahuva           | Work of Mahuva, Talaja and Jesar Taluka  | 116     | Junior Inspector, Mahuva           | Work of Mahuva, Talaja and Jesar Taluka   |
|                | 88      | Junior Inspector, Palitana         | Work of Palitana, Shihor, Gariadhar and Umralla Taluka   | 117     | Junior Inspector, Palitana         | Work of Palitana, Shihor, Galiadhar and Umralla Taluka  |
| Botad          | 89      | Junior inspector, Botad            | Work of Botad, Gadhada, Barvala and Ranpur Taluka  | 118     | Junior Inspector, Bolad            | Work of Botad, Gadhada, Barvala and Ranpur Taluka   |
| Surendra nagar | 90      | Junior Inspector, Dhagandhra       | Work of Dasada, Dhrangadhra Taluka and Ward No. 1 to 8 of Surendranagar Nagarpalika                | 119     | Junior Inspector, Dhagandhra Dn.1  | Work of Dasada, Dhrangadhra Taluka.   |
|                |         |                                    |  | 120     | Junior Inspector, Dhagandhra Dn.2  | Work of Ward No. 1 to 8 of Surendranagar Nagarpalika  |

| District | Sr. No. | Division                            | Field of operation   | Sr. No. | Division                              | Field of operation   |
|----------|---------|-------------------------------------|--|---------|---------------------------------------|--|
| (1)      | (2)     | (3)                                 | (4)  | (5)     | (6)                                   | (7)  |
|          | 91      | Junior Inspector, Surendranagar     | Work of ward No. 9 to 14 of Surendranagar Nagarpalika and Lakhtar, Vadhvan, Limadi, Chuda, Muli, Thangadh, Chotila and Sayala Taluka | 121     | Senior Inspector, Surendranagar Dn. 1 | Work of Ward No. 9 to 14 of Surendranagar Nagarpalika                                  |
|          |         |                                     |  | 122     | Junior Inspector, Surendranagar Dn. 2 | Work of Lakhtar, Vadhvan, Limadi, Chuda, Muli, Thangadh, Chotila and Sayala Taluka     |
| Amreli   | 92      | Senior Inspector, Savarkundala Dn.1 | Work of New goods  | 123     | Senior Inspector, Savarkundala Dn. 1  | New goods work of Shivajinagar Area  |
|          |         |                                     |  | 124     | Junior Inspector, Savarkundala Dn. 2  | New goods work Other than Shivajinagar Area  |
|          | 93      | Junior Inspector, Savarkundala Dn.2 | Work of Savarkundala Taluka  | 125     | Junior Inspector, Savarkundala Dn.3   | Work of Taluka towards Savar Village of Navali River                                   |
|          |         |                                     |  | 126     | Junior Inspector, Savarkundala Dn.4   | Work of Taluka towards Kundla Village of Navli River                                   |
|          | 94      | Junior Inspector, Amreli Dn.1       | Work of Babra, Lathi, Liliya, Kunkavav and Amreli City   | 127     | Junior Inspector, Amreli Dn. 1        | Work of Babra, Lathi, Liliya, Kunkavav and Amreli City                                 |
|          | 95      | Junior Inspector, Amreli Dn.2       | Work of Dhari, Bagsara, Khambha, Rajula, Jafrabad and Amreli Taluka  | 128     | Junior Inspector, Amreli Dn.2         | Work of Dhari, Bagsara, Khambha, Rajula, Jafrabad and Amreli Taluka (except city)      |
| Junagadh | 96      | Junior Inspector, Junagadh Dn. 1    | Work of Local area Limit of ward No. 1 to 20 of Municipal Corporation of Junagadh City   | 129     | Junior Inspector, Junagadh Dn. 1      | Work of Local area Limit of ward No. 1 to 20 of Municipal Corporation of Junagadh City |
|          | 97      | Junior Inspector, Junagadh Dn.2     | Work of Junagadh Taluka, Visavadar, Mendarda and Bhesan Taluka   | 130     | Junior Inspector, Junagadh Dn.2       | Work of Junagadh Taluka, Visavadar, Mendarda and Bhesan Taluka                         |

| District    | Sr. No. | Division                                | Field of operation  | Sr. No. | Division                                | Field of operation   |
|-------------|---------|---|---|---------|---|--|
| (1)         | (2)     | (3)                                     | (4)   | (5)     | (6)                                     | (7)  |
|             | 98      | Junior Inspector, Kesod                 | Work of Keshod, Mangrol and Malia Hatina Taluka                 | 31      | Junior Inspector, Kesod                 | Work of Keshod, Mangrol, Malia Hatina, Manavadar & Vanthali Taluka |
|             | 99      | Junior Inspector, Manavadar             | Work of Manavadar and Vanthali Taluka                           |         |   |  |
| Gir Somnath | 100     | Junior Inspector, Veraval               | Work of Veraval & Sutrapada Taluka                              | 132     | Junior Inspector, Veraval               | Work of Veraval & Sutrapada Taluka                                 |
|             | 101     | Junior Inspector, Una                   | Work of Kodinar, Talala, Una and Gir Gadhda Taluka              | 133     | Junior Inspector, Una                   | Work of Kodinar, Talala, Una and Gir Gadhda Taluka                 |
| Porbandar   | 102     | Senior Inspector, Porbandar             | Work of Porbandar City  | 134     | Senior Inspector, Porbandar             | Work of Porbandar City   |
|             | 103     | Junior Inspector, Porbandar             | Work of Porbandar Taluka Ranavav and Kutiyana Taluka            | 135     | Junior Inspector, Porbandar             | Work of Porbandar Taluka Ranavav and Kutiyana Taluka               |
| Mahesana    | 104     | Junior Inspector, Mehsana               | Work of Mehsana and Jotana Taluka                               | 136     | Junior Inspector, Mehsana               | Work of Mehsana and Jotana Taluka                                  |
|             | 105     | Junior Inspector, Kadi                  | Work of Kadi and Bechraji Taluka                                | 137     | Junior Inspector, Kadi                  | Work of Kadi Taluka  |
|             |         |   |   | 138     | Junior Inspector, Bechraji              | Work of Bechraji Taluka  |
|             | 106     | Junior Inspector, Visnagar              | Work of Visnagar, Kheralu and Satiasana Taluka                  | 139     | Junior Inspector, Visnagar              | Work of Visnagar, Kheralu and Satiasana Taluka                     |
|             | 107     | Junior Inspector, Vijapur               | Work of Vijapur Taluka  | 140     | Junior Inspector, Vijapur               | Work of Vijapur Taluka   |
|             | 108     | Junior Inspector, Unza                  | Work of Unza and Vadnagar Taluka                                | 141     | Junior Inspector, Unza                  | Work of Unza and Vadnagar Taluka                                   |
| Patan       | 109     | Junior Inspector, Siddhpur              | Work of Siddhpur Taluka   | 142     | Junior Inspector, Siddhpur              | Work of Siddhpur Taluka  |
|             | 110     | Senior Inspector, Patan                 | Work of Patan, Sarwati and Chanasma Taluka                      | 143     | Senior Inspector, Patan                 | Work of Patan, Sarwati and Chanasma Taluka                         |
|             | 111     | Junior inspector, Patan (Now Radhanpur) | Work of Sami, Harij, Sankheswar, Radhanpur and Santalpur Taluka | 144     | Junior Inspector, Patan (Now Radhanpur) | Work of Sami, Harij, Sankheswar, Radhanpur and Santalpur Taluka    |
| Panchmahal  | 112     | Junior Inspector, Godhara Dn. I         | Work of Godhra City, Halol, Kalol and Jambhughoda Taluka        | 145     | Senior Inspector, Godhara Dn. 1         | Work of Godhra City, Halol, Kalol and Jambhughoda Taluka           |



| District  | Sr. No. | Division                               | Field of operation   | Sr. No. | Division                               | Field of operation   |
|-----------|---------|--|--|---------|--|--|
| (1)       | (2)     | (3)                                    | (4)  | (5)     | (6)                                    | (7)  |
|           | 113     | Junior Inspector, Godhara Dn.2         | Godhra rural, Sahera, Morvahadaf, Ghoghamba and Kalol Taluka except urban areas. | 146     | Junior Inspector, Godhara Dn.2         | Godhra rural, Sahera, Morvahadaf, Ghoghamba and Kalol Taluka except urban areas. |
| Dahod     | 114     | Junior Inspector, Dahod                | Work of Dahod, Garbada and Dhanpur Taluka  | 147     | Junior Inspector, Dahod                | Work of Dahod, Garbada and Dhanpur Taluka  |
|           | 115     | Junior Inspector, Devgadhbhariya (TSP) | Work of Devgadhbhariya, Fatehpura, Zalod, Limkheda and Sanjeli Taluka            | 148     | Junior Inspector, Devgadhbhariya (TSP) | Work of Devgadhbhariya, Fatehpura, Zalod, Limkheda and Sanjeli Taluka            |
| Mahisagar | 116     | Junior Inspector, Santrampur (TSP)     | Work of Santarampur, Kadana, Khanpur, Lunavada, Balasinor and Virpur Taluka      | 149     | Junior Inspector, Santrampur (TSP)     | Work of Santarampur, Kadana, Khanpur, Lunavada, Balasinor and Virpur Taluka      |

By order and in the name of the Governor of Gujarat,

**P.N.MEHTA,**

Section Officer

Food, Civil Supply and Consumer Affairs Department.

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# The Gujarat Government Gazette

## EXTRAORDINARY

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### PART IV-A

Rules and Orders (Other than those published in Parts I, I-A, and I-L) made  
by the Government of Gujarat under the Central Acts

#### LABOUR AND EMPLOYMENT DEPARTMENT

##### Notification

Sachivalaya, Gandhinagar, 17<sup>th</sup> September, 2018.

#### THE EMPLOYEES' PROVIDENT FUNDS AND MISCELLANEOUS PROVISIONS ACT, 1952

**No: KHR-2018-222-EPF-18-2018-332111-M(3):-** WHEREAS the Government of Gujarat, Labour and Employment Department has exempted the Surat District Co-Op. Bank Ltd., Surat (hereinafter referred to as "said establishment") (GJ/SRT/4672) from the operation of the all provisions of the Employees' Provident Fund Scheme, 1952 (hereinafter referred to as "said scheme") vide item No. 157 in Schedule I of Notification No.:- KH-R-90-60-EPF-1086-33790-M(3), Dated: 26/02/1990 under clause (a) of sub-section (1) of section 17 of the Employees Provident Funds and Miscellaneous Provisions Act, 1952 (19 of 1952) subject to the conditions and classifications specified in the Schedule annexed thereto and specified that the exemption shall be liable to be cancelled for violation of any conditions;

AND WHEREAS, the said establishment has violated the following terms and conditions of exemption shown in Appendix "A" of para 27AA of the said Scheme namely:-

1. The said establishment had engaged/deployed 156 employees and shown/reported them as Apprentice and has not extended the benefits of provident fund to those employees and hence violated condition no. 3 of para 27AA.
2. The Board of Trustees of the said establishment have failed to invest the amount of the provident fund as per the directions of the Government from time to time and hence violated condition no. 17 of para 27AA.
3. The said establishment has appointed the same auditor M/s Sujesh Suratwala and Associates for two consecutive years of 2009-10 and 2010-11 and hence violated condition no. 24 (c) of para 27AA;

AND WHEREAS, the show cause notice issued under para 27AA of the said Scheme in response to the show cause notice in this connection the said establishment has explained the situation and represented that the exemption granted by the Government may not be cancelled;

AND WHEREAS, the provisions are mandatory, the reply made by the said establishment is not acceptable and satisfactory and the Regional Provident Fund Commissioner-I (Exemption), Employees' Provident Fund Organisation, Ministry of Labour and Employment, Government of India, New Delhi has recommended to cancel the exemption granted in respect of the said establishment.

AND WHEREAS, after careful consideration the Government of Gujarat has decided to cancel the exemption granted to the said establishment;

NOW, THEREFORE in exercise of the powers conferred by subsection (4) of section 17 of the Employees Provident Funds and Miscellaneous Provisions Act, 1952 (19 of 1952) read with condition 27 of the Appendix "A" under para 27AA of the said Scheme the exemption granted to the said establishment by the Government of Gujarat hereby stands cancelled with the immediate effect.

By order and in the name of the Governor of Gujarat,

**R. H. VASAVA,**  
Deputy Secretary to Government.

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### PART IV-A

Rules and Orders (Other than those published in Parts I, I-A, and I-L) made  
by the Government of Gujarat under the Central Acts

#### HEALTH AND FAMILY WELFARE DEPARTMENT

##### Notification

Sachivalaya, Gandhinagar, 10<sup>th</sup> September, 2018.

#### Food Safety and Standards Act, 2006

**NO.FSSAI/NOTIFICATION/274-474/A, 2018 :-** WHEREAS, in the research done at Tata Memorial Hospital, it is observed that consumption of Gutka and Pan Masala cause carcinogenic and co-carcinogenic effects;

AND WHEREAS, the joint studies conducted by Hammer and Tata Institute of Fundamental Research, it is revealed that consumption of Gutka leads to a very high increased risk of oral Cancer;

AND WHEREAS, the survey conducted by the Global Adult Tobacco Survey of India (GATS) in the year 2009-10 reveal that 35% adult use tobacco in any one of the forms, out of which 21% are found to be consuming smokeless tobacco;

AND WHEREAS, several Non-Government Organizations have also reported to the State Government to put complete ban on the sale of Gutka and Pan Masala in the State of Gujarat;

AND WHEREAS, Gutka and Pan Masala known by any name are articles of food which contain tobacco and nicotine as ingredients and consumption of such products are injurious to health and thus contravenes the provisions of regulation 2.3.4 of the Food Safety and Standards (Prohibition and Restrictions on Sales) Regulation, 2011;

AND WHEREAS, it is expedient to prohibit in the interest of public health, the manufacture, storage, distribution and sale of Gutka and Pan Masala in which tobacco or nicotine is widely used as an ingredient and are sold in the State of Gujarat.

AND WHEREAS, the Commissioner of Food Safety is empowered under section 30 of the Food Safety and Standards Act, 2006 to prohibit, in the interest of public health, the manufacture, storage, distribution or sale of any article of food either in the whole of the State or any area or part thereof; and accordingly the Commissioner of Food Safety, Gujarat State prohibited manufacture, storage, distribution and sale of Gutka and Pan Masala containing tobacco or nicotine in the State of Gujarat for a period of one year from 11<sup>th</sup> September 2012 vide notification No. FSSA/Notification/266/A, dated 28<sup>th</sup> August, 2012.

SUBSEQUENTLY, the Commissioner of Food Safety, Gujarat State prohibited manufacture, storage, distribution and sale of Gutka and Pan Masala containing tobacco or nicotine in the State of Gujarat for a period of one year, i.e. from 12<sup>th</sup> September, 2013 vide notification No. FSSA/Notification/161/A, dated 6<sup>th</sup> September, 2013 and for one more year i.e. from 12<sup>th</sup> September, 2014 vide notification No. FSSA/Notification/1960/A, dated 9<sup>th</sup> September, 2014 and for one year from 12<sup>th</sup> September 2015, i.e. vide notification No. FSSA/Notification/93419/A dated 10<sup>th</sup> September 2015 and for one more year i.e. 12<sup>th</sup> September 2016 i.e. vide notification No. FSSA/Notification/106821/A dated 9<sup>th</sup> September 2016 and also for one year from 12<sup>th</sup> September 2017 i.e. vide notification No. FSSA/Notification/100669769/ A/2017, dated 11<sup>th</sup> September 2017.

The Gutka and Pan Masala containing tobacco or nicotine if consume will and endanger human health; And therefore, I the Commissioner of Food Safety, Gujarat State, in exercise of the powers conferred by clause (a) of Sub section 2 of Section 30 of the Food Safety and Standards Act, 2006 (Act No. 34 of 2006), in the interest of Public Health, hereby prohibit the manufacture, storage, distribution or sale of Gutka and Pan Masala known by any names containing tobacco or nicotine as an ingredients available in the market and any other products marketed separately to constitute as Gutka and Pan Masala as final product in the whole of the State of Gujarat, for a period of one year from 12<sup>th</sup> September, 2018. However, the said prohibition shall not be applicable in respect to 100 % export oriented units.

By order and in the name of the Governor of Gujarat,

**DR. H.G.KOSHIA,**  
Commissioner of Food Safety  
Gujarat State, Gandhinagar.

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### PART IV-A

Rule and Orders (Other than those published in Parts I, I-A, and I-L) made  
by the Government of Gujarat under the Central Acts

#### PORTS AND TRANSPORT DEPARTMENT

##### Notification

Sachivalaya, Gandhinagar, 5<sup>th</sup> October, 2018

##### Inland Vessels Act, 1917.

No. PT/2018/18/WKS/102015/GOI-93/GH-1: WHEREAS the co-ordinates of the base line have been notified by the Ministry of External Affairs, Government of India vide S.O.1197 (E), dated 11/05/2009 and S.O.2962 (E), dated 20/11/2009, ANDWHEREAS waters inland of Base line shall be treated as “INLAND WATERS”.

Now THEREFORE, In exercise of the powers conferred by section 3 of the Inland Vessels Act, 1917, the Government is pleased to recognise different zones as mentioned below according to the Significant Wave Height for the purpose of movement of Inland Vessels registered under the Inland Vessels Act 1917:-

##### (A) Definitions -

- Zone 1- A zone where maximum significant wave height does not exceed 2 mtrs.  
(SWH between 1.2 to 2 mtrs)
- Zone 2 - A zone where maximum significant wave height does not exceed 1.2 mtrs  
(SWH between 0.6 to 1.2 mtrs )
- Zone 3 – A zone where maximum significant wave height does not exceed 0.6 mtrs.  
(SWH upto 0.6 mtrs)
- Zone X – A zone where maximum significant wave height is more than 2 mtrs.  
(SWH more than 2 mtrs)

(B) Chart showing sectors and zone's applicable for each month.

| Sector | A | B | C | D | E | F |
|--------|---|---|---|---|---|---|
| JAN    | 3 | 3 | 3 | 3 | 2 | 3 |
| FEB    | 3 | 3 | 3 | 3 | 3 | 3 |
| MAR    | 3 | 2 | 3 | 3 | 2 | 2 |
| APR    | 2 | 2 | 3 | 2 | 2 | 2 |
| MAY    | 2 | 2 | 2 | 2 | 1 | 2 |
| JUNE   | 1 | X | 2 | X | X | X |
| JULY   | 1 | X | 2 | X | X | X |
| AUG    | 3 | 2 | 3 | 1 | 1 | 1 |
| SEP    | 3 | 3 | 3 | 2 | 2 | 2 |
| OCT    | 3 | 3 | 3 | 3 | 3 | 3 |
| NOV    | 3 | 3 | 3 | 3 | 3 | 3 |
| DEC    | 3 | 1 | 3 | 2 | 3 | 1 |

**Note-** Above is based on the SWH study carried out by Indian National Centre for Ocean Information Services.

(C)

Category A – All inland vessels constructed for operating in Zone 1.

Category B – All inland vessels other than category A.

(D)

The Inland vessels having classification society certificate for Zone 1 can ply in sectors having Zones 1, 2 and 3 i.e. SWH upto 2 mtrs.

The Inland vessels having classification society certificate for Zone 2 can ply in sectors having Zone 1 and 2 i.e. SWH upto 1.2 mtrs.

The Inland vessels not having classification society certificate can ply only in sector having Zone 3 i.e. SWH upto 0.6 mtrs.

IV vessels cannot ply in sectors having SWH more than 2 mtrs and marked as “X”.

(E)

The Inland vessels due to any of the reason wants to ply in sector (within IV limit) which she is not allowed as mentioned in above para's, than permission shall be required seek from authorised officials of Gujarat Maritime Board.

(F)

The Inland vessels shall be required to obtain voyage permission from competent authority i.e. DGS/MMD/IRS/ authorised officers of Gujarat Maritime Board for going out of specified IV limit.

(G)

Sector E and F are outside IV limits, Inland vessels shall be required to obtain voyage permission from DGS/MMD/IRS/GMB authorised officials.

(H)

Sector E and F, applicability w.r.t 5 NM corridor to be used by Inland vessel including loaded voyages, shall be required to possess valid certificate/permission issued by Maritime Boards authorised officers based on the guidelines issued by Directorate General of Shipping.

(I)

Special category and special operations of Inland vessels for plying in Inland vessels waters like passenger vessel, tankers, towing operations etc. has to obtain specific permission from authorised official of Gujarat Maritime Board, which shall depend on many factors eg- area of operation, duration of voyages, type of cargo, number of passengers, vessels constructions and equipment provided, manning, weather conditions, traffic density, terminal facilities etc.

**Note**– Authorised Official of Gujarat Maritime Board are as follows –

1. Para E, F and G, it is Chief Nautical Officer for entire Gujarat Coast, Nautical Surveyor for Gulf of Kutch and Nautical Officer for Gulf of Khambhat.
2. Para H and I, it is Chief Nautical Officer and Nautical Surveyor.

### **SECTORS WITHIN INLAND VESSEL LIMIT and 5 NM CORRIDOR FOR GUJARAT COAST**

- 1) Sector A: Sea area East of Longitude 069 30' E in the Gulf of Kutch.
- 2) Sector B : Sea area bounded by Baseline Waypoints 7 (Lat 23 11'03" N Lon 068 36'33" E) and Baseline Waypoint 8 (Lat 22 18'36" N Lon 068 55'58" E) and West of Longitude 069 30' E including inshore sea area between Baseline Waypoints 1 (Lat 23 40'20.80" N Lon 068 04'31.20" E) to Baseline Waypoint 7 (Lat 23 11'03" N Lon 068 36'33" E).
- 3) Sector C: Sea area North of Latitude 21 21' N in the Gulf of Khambhat.
- 4) Sector D: Sea area bounded by Baseline Waypoints 9 (Lat 20 41'24" N Lon 070 49'18" E) and Baseline Waypoint 10 (Lat 19 50'32" N Lon 072 38'13" E) and South of Lat 21 21' N in the Gulf of Khambhat covering Gujarat Waters.
- 5) Sector E: Sea Area corridor of 5 Nautical Miles parallel to the Baseline i.e. Sea Area between Baseline and (Way point 1 A) Lat 23 37.5' N Lon 068 00' E and (Way point 8 E) Lat 21 39.8' N Lon 069 24.4' E.
- 6) Sector F: Sea Area corridor of 5 Nautical miles parallel to the Baseline i.e. Sea Area between Baseline & (way point 8 E) Lat 21 39.8' N Lon 069 24.4' E and (way point 10 A) Lat 19 47.2' N Lon 072 33.5' E covering Gujarat Water.

### **Five (5) NAUTICAL MILES CORRIDOR WAYPOINTS PARALLEL TO BASELINE**

- 1) 1A : Lat 23 37.5' N Lon 068 00' E
- 2) 2A : Lat 23 34.5' N Lon 068 02' E
- 3) 3A : Lat 23 33' N Lon 068 03.2' E
- 4) 4A : Lat 23 20.6' N Lon 068 17' E
- 5) 5A : Lat 23 14.5' N Lon 068 24.2' E
- 6) 6A : Lat 23 11.9' N Lon 068 27.5' E
- 7) 7A : Lat 23 04.8' N Lon 068 32.6' E  
7B: Lat 22 58.7' N Lon 068 35.4 E  
7C: Lat 22 42.3' N Lon 068 41.3' E  
7D: Lat 22 30.0' N Lon 068 46.0' E
- 8) 8A : Lat 22 17.2' N Lon 068 50.6' E  
8B: Lat 22 06.7' N Lon 068 56.6' E  
8C: Lat 21 58.8' N Lon 069 04.0' E  
8D: Lat 21 52.7' N Lon 069 10.0' E



8E: Lat 21 39.8' N Lon 069 24.4' E

8F: Lat 21 28.2' N Lon 069 38.8' E

8G: Lat 21 04.8' N Lon 070 00.0' E

9) 9A : Lat 20 36.9' N Lon 070 47.2' E

9B: Lat 20 29.3' N Lon 071 03.5' E

9C: Lat 20 06.4' N Lon 071 51.7' E

9D: Lat 19 56.2' N Lon 072 13.6' E

10) 10A: Lat 19 47.2' N Lon 072 33.5' E

#### WAYPOINTS OF IV LIMIT - BASELINE SYSTEM, GUJARAT COAST COORDINATES

| No. | Geographical Name   | Latitude       | Longitude       |
|-----|---|----------------|-----------------|
| 1   | Sir Mouth North   | 23 40'20.80" N | 068 04'31.20" E |
| 2   | Sir Mouth South   | 23 36'30.30" N | 068 07'00.90" E |
| 3   | Pir Sanai Creek   | 23 36'15.20" N | 068 07'28.50" E |
| 4   | Kori Creek  | 23 24'14.00" N | 068 20'49.00" E |
| 5   | Veraya Thar   | 23 18'24.00" N | 068 27' 48.00"E |
| 6   | Kharo Creek   | 23 15'40.00" N | 068 30'50.00" E |
| 7   | Bari Beacon   | 23 11'03.00" N | 068 36'33.00" E |
| 8   | Kachchigad (Thence following low water line to Baseline Waypoint 9) | 22 18'36.00" N | 068 55'58.00" E |
| 9   | Diu Head W  | 20 41'24.00" N | 070 49'18.00" E |
| 10  | Tarapur Point   | 19 50'32.00" N | 072 38'13.00" E |

By order and in the name of the Governor of Gujarat,

**PRAKASH MAJMUDAR,**  
Deputy Secretary to Government.

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# The Gujarat Government Gazette

## EXTRAORDINARY

PUBLISHED BY AUTHORITY

Vol. LIX ]

WEDNESDAY, OCTOBER 10, 2018/ASVINA 18, 1940

Separate paging is given to this Part in order that it may be filed as a Separate Compilation.

### PART IV-A

**Rule and Orders (Other than those published in Parts I, I-A, and I-L) made  
by the Government of Gujarat under the Central Acts**

#### FINANCE DEPARTMENT

#### Notification

Sachivalaya, Gandhinagar, 10<sup>th</sup> October, 2018

#### Constitution of India.

**No.(GN-100)/VVK/122018/452734/Th3 :-** In exercise of the powers conferred by the proviso to article 309 of the Constitution of India and in supersession of all the rules made in this behalf, the Governor of Gujarat hereby makes the following rules to provide for regulating recruitment to the post of State Tax Inspector, Class III, under the Commissionerate of Goods and Services Tax, Gujarat State, namely:—

1. These rules may be called the State Tax Inspector, Class III, in the subordinate service of the Commissionerate of Goods and Services Tax, Recruitment Rules, 2018.
2. Appointment to the post of State Tax Inspector, Class III, in the subordinate service of the Commissionerate of Goods and Services Tax, Gujarat State, shall be made either,—

[A](a) by promotion of a person of proved merit and efficiency from amongst the persons who,—

- (i) have worked for not less than five years in the cadre of Senior Clerk, Class III, in the subordinate service of the Commissionerate of Goods and Services Tax, Gujarat State;
- (ii) have passed the prescribed departmental examination for promotion to the post of State Tax Inspector, Class III, in the subordinate services of the Commissionerate of Goods and Services Tax, Gujarat State; and
- (iii) have passed the qualifying examination for computer knowledge in accordance with the provisions of the Gujarat Civil Service Computer Competency Training and Examination Rules 2006:

Provided that where the appointing authority is satisfied that the person having the experience specified in sub-clause (i) above is not available for promotion and that it is necessary in the public interest to fill up the post by promotion even of a person having experience for a lesser period; it may, for reasons to be recorded in writing, promote such person who possesses experience of a period of not less than two-thirds of the period specified in sub-clause (i) above; or

(b) by promotion on the basis of the Special Competitive Examination held by the Gujarat Public Service Commission of a person of proved merit and efficiency from amongst the persons, who,—

- (i) have worked for not less than five years in the cadre of Senior Clerk, Class III, in the subordinate service of the Commissionerate of Goods and Services Tax, Gujarat State;
- (ii) possess a Bachelor degree obtained from any of the Universities established or incorporated by or under the Central or a State Act in India; or any other educational institution recognised as such or declared to be deemed as a University under section 3 of the University Grants Commission Act, 1956 or possess an equivalent qualification recognised by the Government;
- (iii) have passed the qualifying examination for computer knowledge in accordance with the provisions of the Gujarat Civil Services Computer Competency Training and Examination Rules, 2006;
- (iv) have passed the Departmental examination for promotion to the post of State Tax Inspector, Class III, in the Gujarat Goods and Services Tax Services subordinate the Commissionerate of Goods and Services Tax, Gujarat State; and
- (v) have passed the Special Competitive examination in accordance with the rules prescribed by the Government; or

(B) on the basis of the result of the competitive examination held for the purpose.

3. (I) The appointment on the basis of result of the competitive examination and promotion shall be made in the ratio of **4:3**.

(II) The appointment by promotion and promotion on the basis of special competitive examination shall be made in the ratio of **16:1**.

4. To be eligible for appointment on the basis of the result of a competitive examination held for the purpose to the post mentioned in rule 2, the candidate shall,—

- (a) not be more than 35 years of age;
- (b) possess a Bachelor's degree obtained from any of the Universities established or incorporated by or under the Central or a State Act in India; or any other Educational institution recognised as such or declared to be deemed as a University under section 3 of the University Grants Commission Act, 1956 or possess an equivalent qualification recognised by the Government;
- (c) possess the basic knowledge of computer application as prescribed in the Gujarat Civil Services Classification and Recruitment (General) Rules 1967; and
- (d) possess adequate knowledge of Gujarati or Hindi or both.

5. The provisions of rule 9A of the Gujarat Civil Services Classification and Recruitment (General) Rules, 1967 shall be applicable in respect of the candidate appointed on the basis of the result of a competitive examination held for the purpose.

6. The candidate appointed either on the basis of the result of a competitive examination held for the purpose or by promotion shall be required to undergo such training and pass such examination as may be prescribed by the Government.
7. The candidate appointed on the basis of the result of competitive examination held for the purpose shall be required to furnish a security and surety bond in such form, for such amount and for such period as may be prescribed by the Government.

By order and in the name of the Governor of Gujarat,

**K. H. PATHAK,**  
Deputy Secretary to Government.

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# The Gujarat Government Gazette

## EXTRAORDINARY

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### PART IV-A

Rule and Orders (Other than those published in Parts I, I-A, and I-L) made  
by the Government of Gujarat under the Central Acts

#### FINANCE DEPARTMENT

#### Notification

Sachivalaya, Gandhinagar, 12<sup>th</sup> October, 2018

#### Constitution of India.

**No.(GN-103)VVK/122018/463901/Th3 :-** In exercise of the powers conferred by the proviso to article 309 of the Constitution of India and in supersession of all the rules made in this behalf the Governor of Gujarat hereby makes the following rules to provide for regulating the method of examination for recruitment to the post of State Tax Inspector, Class III, in the subordinate service of the Commissionerate of Goods and Services Tax, Gujarat State, namely:

- 1. Short Title.**-These rules may be called the State Tax Inspector, Class III, Competitive Examination Rules, 2018.
- 2. Definitions.** -In these rules, unless the context otherwise requires,-
  - (a) "Appendix" means an Appendix appended to these rules;
  - (b) "Commission" means the Gujarat Public Service Commission;
  - (c) "examination" means the competitive examination for the recruitment to the post of State Tax Inspector, Class III as referred to in rule 4;
  - (d) "Government" means the Government of Gujarat;
  - (e) "post" means State Tax Inspector, Class III in the subordinate service of the Commissionerate of Goods and Services Tax;
  - (f) "prescribed" means prescribed by regulations made by the Commission.
  - (g) "relevant recruitment rules" means the recruitment rules prescribed by the Government for the concerned post.

- 3. Holding of Examination.**-

- (1) The Commission, on receiving the requisition from the Government, shall hold an

examination for selection of candidates for recruitment to the post.

(2) The Commission shall decide the manner in which it shall conduct the examination.

**4. Mode of Examination.-**

(1) The examination shall be held in two successive stages, namely :-

(a) Preliminary Examination (Objective Type) for selection of candidates for Main Examination and;

(b) Main Examination (Written Descriptive Test) for the final selection of the candidates for the post.

(2) The Preliminary Examination and the Main Examination shall be held in such manner as specified in Section- II and Section- III of the Appendix.

(3) The number of candidates to be called for the Main Examination shall be approximately six times the number of total vacancies advertised.

**5. Syllabus.-**

The Commission shall determine the details of syllabus of each paper specified in Section- II and Section- III of the Appendix.

**6. Medium of Examination.-**

The medium of examination shall be Gujarati except Paper-II of section-III of the Appendix for which the medium shall be English.

**7. Place of Examination.-**

(1) The date, time and places of the examination shall be decided by the Commission.

(2) The candidate shall be required to attend all the stages of examination at his own expenses on the dates, time and places notified by the Commission.

**8. Application for Examination.-**

(1) A candidate who desires to appear at the Preliminary Examination shall submit an application in such form as may be prescribed by the Commission along with such fees as may be fixed by the Government.

(2) The candidates who are declared qualified by the Commission for admission to the Main Examination shall apply again in such form as may be prescribed by the Commission along with such fees as may be fixed by the Government.

(3) The fees shall be paid in such manner as may be prescribed by the Commission and fees once paid shall not be refunded or held over for the subsequent examination in any circumstances.

**9. Condition for Eligibility.-**

(1) A candidate shall not be qualified for admission to the examination unless he is, -

(a) a citizen of India, or

(b) a subject of Nepal, or

(c) a subject of Bhutan, or

(d) a Person of Indian origin who has migrated from Pakistan, Myanmar, Sri Lanka, East African countries of Kenya, Uganda, the United Republic of Tanzania, Zambia, Malawi, Zaire, Ethiopia and Vietnam, with the Intention of permanently settling in India:

Provided that the candidates belonging to categories (b), (c) or (d) shall be required to furnish a certificate of eligibility issued by the Government;

- (2) A candidate who is required to produce a certificate of eligibility, shall be allowed to appear in the examination conducted by the Commission and he shall also be appointed provisionally subject to the production of eligibility certificate within time frame, as decided by the Government;

**10. Disqualification for appointment on ground of plural marriage.-**

- (1) No person who,-  
(a) has entered into or contracted a marriage with a person having a spouse living, or  
(b) having a spouse living, has entered into or contracted a marriage with any other person shall be eligible for appointment to the post:

Provided that subject to the provisions of any law for the time being in force, the Government may, if satisfied that there are special grounds for doing so, exempt any person from the operation of this sub-rule;

- (2) The candidate shall be required to declare in the application form whether he or she as the case may be, is married and, in the case of the male candidate whether he has more than one wife living and in the case of a female candidate whether she has married to a man who has already another wife living.

**11. Educational Qualifications and Age Limit.-**

- (1) A candidate possessing the requisite educational qualifications, other qualifications and requirements for the appointment under the relevant recruitment rules of the post, shall be eligible for admission to the examination:

Provided that the candidate who has appeared at a bachelor's degree level examination, the passing of which would render him educationally qualified for the examination mentioned in rule 3, but result of such examination is not declared, till the last date of filling of the application form as also the candidates who intend to appear at such qualifying examination shall also be eligible for admission to the Preliminary Examination, All candidates who are declared qualified by the Commission for appearing in the Main Examination shall be required to produce proof of passing the degree examination along with their application for the Main Examination:

Provided further that the candidate who fails to produce the proof of passing the bechelor degree examination shall not be eligible for admission to Main Examination.

- (2) A candidate for admission to the examination shall have attained the minimum age of 20 years and shall not have attained the maximum age prescribed in the relevant recruitment rules on the date as may be specified in the advertisement by the Commission.

**12. Decision of Commission shall be final.-**

- (1) No candidate shall be allowed to appear at the Main Examination unless the Commission is satisfied that,-  
(a) the candidate possesses the requisite qualifications and fulfills other requirements under the relevant recruitment rules of the post;  
(b) he has paid the requisite fees along with the application;  
(c) the candidate is eligible in all respects and complies with all the requirements; and  
(d) the candidate must fill the application form for the Main Examination and copy the same along with the copy of requisite documents shall be submitted to the Commission.

- (2) The decision of the Commission as to the eligibility of the candidate for admission to the Main Examination shall be final.
- (3) Subsequently, if at any time, the candidate is found ineligible for appearing in the Main Examination, his candidature shall be treated as cancelled and if already selected and appointed, his appointment shall be treated as cancelled *ab-initio* and his service shall be terminated forthwith:

Provided that no such appointment shall be terminated unless he has been given an opportunity of being heard .

### **13. Appearance at the Main Examination.-**

- (1) The Preliminary Examination is meant to serve as a screening test only; the candidate who obtains such minimum qualifying marks in the Preliminary Examination, as may be fixed by the Commission, shall be admitted to the Main Examination.
- (2) The marks obtained in the Preliminary Examination by the candidates who are declared qualified for admission to the Main Examination shall not be counted for determining their final order of merit. The number of candidates to be admitted to the Main Examination shall be about six times of the total number of vacancies so advertised. Only those candidates who are declared by the Commission to have qualified in the Preliminary Examination shall be eligible for admission to the Main Examination:

Provided that the candidates belonging to the Scheduled Castes, Scheduled Tribes and Socially and Educationally Backward Classes (including Nomadic Tribes and Denotified Tribes) may be called for Main Examination, by the Commission, by applying relax standards in the Preliminary Examination, if the Commission is of the opinion that sufficient number of candidates from these categories are not likely to be called for the Main Examination on the basis of the general standard in order to fill up the vacancies reserved for them.

### **14. Preparing of Merit List.-**

- (1) After Main Examination, the names of candidates shall be arranged by the Commission in the order of merit on the basis of the Main Examination marks finally awarded to each candidate. Thereafter, the Commission shall, for the purpose of recommending candidates against unreserved vacancies, fix a qualifying mark (hereinafter referred to as general qualifying standard) with reference to the number of unreserved vacancies to be filled up on the basis of the Main Examination. For the purpose of recommending Reserved Category candidates belonging to the Scheduled Castes, Scheduled Tribes and Socially and Educationally Backward Classes (including Nomadic Tribes and Denotified Tribes) against reserved vacancies, the Commission may relax the general qualifying standard with reference to number of reserved vacancies to be filled up in each of these categories on the basis of the Main Examination:

Provided that the candidates belonging to the Scheduled Castes, Scheduled Tribes and Socially and Educationally Backward Classes (including Nomadic Tribes and Denotified Tribes) who have not availed themselves of any of the concessions or relaxations in the eligibility or the selection criteria, at the examination and who after taking into account the general qualifying standards are found fit for recommendation by the Commission shall not be recommended against the vacancies reserved for Scheduled Castes, Scheduled Tribes and Socially and Educationally Backward Classes (including Nomadic Tribes and Denotified Tribes).



- (2) The Commission may further lower the qualifying standard to take care of any shortfall of candidates for appointment against unreserved vacancies and any surplus of candidates against reserved vacancies arising out of the provisions of this rule.
- (3) There shall be waiting list of 20% of total number of post so advertised. The waiting list shall remain in force in accordance with the relevant rules issued by the Government in this behalf.

**15. Order of Appointment. –**

- (1) The appointment of the candidate to the post shall be subject to the provisions of the relevant recruitment rules.
- (2) Where the candidate fails to join the post offered to him within stipulated time, his name shall be deleted from the list of candidates recommended by the Commission for appointment.

**16. Ineligible if fails to attend mains examination.-**

The candidate, who is qualified for the Main Examination but fails to attend the Main Examination or fails to attend any of the Main Examination papers shall not be eligible for selection.

**17. Result of Main Examination.-**

- (1) (a) The result of the candidates whose names are to be recommended to the Government for the appointment to the post, shall be arranged according to the order of merits of candidates along with the seat number and the total marks obtained by each of the candidates.  
(b) The Commission shall display the names of candidates to be kept on the waiting list.  
(c) The Commission shall also display the result of unsuccessful candidates containing the names, seat number and total marks obtained by each of the candidates.
- (2) The Commission shall, thereafter send a copy of the result to be published in the *Official Gazette* to the Government.

**18. Rechecking of marks of Main Examination.-**

- (1) A candidate who desires to have his marks of Mains Examination rechecked, may apply to the Commission along with such fee as may be fixed by the Commission for each paper within a period of thirty days from the date of declaration of the final result of the Main Examination.
- (2) A candidate who desires to have the marksheet of the Main Examination shall apply to the Commission along with such fee as may be fixed by the Commission within a period of fifteen days from the date of declaration of the final result.
- (3) In no circumstances the marks of any part of the Main Examination shall be disclosed before the official declaration of the final result.

**19. Forwarding the result to Government.-**

The Commission, on declaration of the result shall forward the list of candidates to the Government who are recommended for appointment along with necessary particulars such as whether candidate belongs to the Scheduled Castes, Scheduled Tribes or Socially and Educationally Backward Classes (including Nomadic Tribes and Denotified Tribes) and his date of birth, qualifications and such other particulars.

**20. No right to appointment.-**

The mere success in the examination shall not confer any right to appointment and no candidate shall be appointed to the post unless the Government is satisfied after such

inquiries as may be considered necessary that the candidate is suitable in all respects for appointment to the post.

**21. Medical Examination.-**

The selected candidate shall be required to pass a medical fitness in accordance with the relevant rules, made by Government in this behalf.

**22. Joining to post.-**

The selected candidate for appointment to the concerned post shall be required to join his posting within 30 days from the date of receipt of the appointment order. If the candidate fails to join his posting within 30 days, his appointment order shall be deemed to be cancelled. However, if it is established that for the reasons beyond his control, the candidate could not join the posting within 30 days, the competent authority may, for reasons to be recorded in writing, allow such candidate to join the posting even after expiry of 30 days. However, the seniority of such candidate shall be determined in accordance with the Government orders in that behalf.

**23. Training and examination.-**

The selected candidate shall be required to undergo such training and to pass such examination as may be prescribed by the Government.

**24. Disciplinary actions.-**

The candidate who is or has been declared by the Commission to be guilty of :-

- (1) obtaining support for his candidature by any means;
- (2) impersonating;
- (3) procuring impersonating by any person;
- (4) submitting fabricated documents or documents which have been tempered with;
- (5) making statement which are incorrect or false or suppressing material information;
- (6) resorting to any other irregular or improper means in connection with his candidature for the examination;
- (7) using unfair means during the examination;
- (8) writing irrelevant matter, including absurd language or pornographic matter in the scripts;
- (9) misbehaving in any other manner in the examination hall;
- (10) harassing or doing bodily harm to the staff employed by the Commission for the conduct of the examination;
- (11) attempting to commit or as the case may be, abetting the commission of all or any of the acts specified in the foregoing clauses: or
- (12) violating any of the instructions issued to the candidates along with his admission certificate permitting him to take the examination, shall, in addition to rendering himself liable to criminal prosecution, be Liable –
  - (a) to be disqualified by the Commission from the examination for which he is a candidate;
  - (b) to be debarred either permanently or for a specific period,
  - (c) by the Commission from appearing in any examination or from any Interview for direct selection to be held by them;
  - (d) by the State Government from any employment under it:

Provided that no penalty under clause (a) or clause (b) shall be imposed except after giving the candidate an opportunity of making such representation in writing as he may wish to make in that behalf; or

- (e) to disciplinary action under the appropriate rules if he is already in Government service.

**25. Prohibition to use Certain Devices in examination hall.-**

A candidate shall not be allowed to carry with him a cellular phone, calculator, pager or any other electronic communication device.

**26. Savings.-**

Notwithstanding anything contained in these rules, any action initiated under the previous rules before the commencement of these rules, shall be valid till it is completed, if any.

**Appendix**

(See rule 4,5 and 6)

**SECTION-I**

**PLAN OF EXAMINATION**

The examination shall comprise of two successive stages:

- (A) Preliminary Examination (objective type) for the selection of candidates for Main Examination; and  
(B) Main Examination (Written) for selection of candidates for the post.

**(A) Preliminary Examination.-**The Preliminary Examination shall consist of one paper of objective type (multiple choice questions, MCQ) and carry a maximum of 200 total marks as shown in Section II of this Appendix. This examination is meant as a screening test only. The marks obtained in the Preliminary Examination by the candidates, who are declared qualified for admission to the Main Examination shall not be taken into consideration for determining their final order of merit.

**(B) Main Examination.-**The Main Examination shall consist of written examination of total-400 Marks. The written examination shall consist of four papers, as shown in SECTION-III of this Appendix. The marks obtained by the candidates in the Main Examination shall determine their final ranking.

**SECTION-II**

**Scheme and subjects for the Preliminary Examination.**

The Preliminary Examination shall consist of one paper of total 200 Marks as follow:-

| <b>Paper</b> | <b>Nature of Exam.</b> | <b>Subject.</b>  | <b>Marks.</b> | <b>Duration.</b> |
|--------------|------------------------|------------------|---------------|------------------|
| I            | Objective.             | General Studies. | 200           | 120 minutes.     |

**Note:**

- (1) The detailed syllabus for the question paper shall be such as may be prescribed and notified by the Commission.
- (2) The standard and the course content of the syllabus for General Studies paper shall be of a degree level.
- (3) The question paper shall be of the objective type (Multiple choice questions).
- (4) The blind candidates may be allowed a compensatory time of twenty minutes per hour for each paper.

**SECTION - III****Scheme and Subjects of Main Examination**

The Scheme and subjects of Main Examination shall consist of the following papers:-

| <b>Paper No.</b>   | <b>Subject.</b>     | <b>Marks.</b> | <b>Duration.</b> |
|--------------------|---------------------|---------------|------------------|
| I                  | Gujarati Language.  | 100           | 3 Hours.         |
| II                 | English Language.   | 100           | 3 Hours.         |
| III                | General Studies-I.  | 100           | 3 Hours.         |
| IV                 | General Studies-II. | 100           | 3 Hours.         |
| <b>Total Marks</b> |                     | <b>400</b>    |                  |

**Note:**

- (1) The Standard of Gujarati Paper shall be equivalent to Gujarati subjects (higher level) of Twelfth standard of Gujarat Secondary and Higher Secondary Education Board.
- (2) The Standard of English Paper shall be equivalent to English subjects (Higher level) of Twelfth standard of Gujarat Secondary and Higher Secondary Education Board.
- (3) The standard and the course content of the syllabus for the General Studies papers shall be of a degree level.
- (4) The detailed syllabus for the question paper shall be such as may be prescribed and notified by the Commission.
- (5) The question papers for the main examination shall be of descriptive type.
- (6) The blind candidates may be allowed a compensatory time of twenty minutes per hour for each paper.

By order and in the name of the Governor of Gujarat,

**K. H. PATHAK,**  
Deputy Secretary to Government.

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# The Gujarat Government Gazette

## EXTRAORDINARY

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### PART IV-A

Rule and Orders (Other than those published in Parts I, I-A, and I-L) made  
by the Government of Gujarat under the Central Acts

#### FOREST AND ENVIRONMENT DEPARTMENT

#### NOTIFICATION

Sachivalaya, Gandhinagar, 29<sup>th</sup> September, 2018

#### Air (Prevention & Control of Pollution) Act, 1981

No. GVN/11/102018/309/E- In exercise of the powers conferred by sub-sections (1) & (2) of section 54 read with section 31A of the Air (Prevention & Control of Pollution) Act, 1981 (14 of 1981) and of all other powers enabling in that behalf the Government of Gujarat, after consultation with the state board hereby make the following rules, further to amend the Gujarat Air (Prevention & Control of Pollution) Rules, 1983, namely.

- (1) These Rules may be called the Gujarat Air (Prevention & Control Pollution) (Amendment) Rules, 2018.
- (2) They shall come into force on and with effect from the date of their publication in the official Gazette.
- In the said rules for schedule - I, the following shall be substituted namely:-

#### SCHEDULE-I

(see rule-9(2))

"TABLE -A"

#### PROCESSING FEES FOR CTE

| Sr. No. | Investment<br>(Rs. In Crores) | Existing Rate of NOC<br>Fees (in Rs.) | Revised Rate of NOC<br>Fees (in Rs.) |
|---------|-------------------------------|---------------------------------------|--------------------------------------|
| 1       | 0 to < 0.25                   | 1,500                                 | 2,000                                |
| 2       | 0.25 to < 0.5                 | 2,500                                 | 3,000                                |
| 3       | 0.5 to < 1                    | 5,000                                 | 6,000                                |
| 4       | 1 to < 5                      | 12,500                                | 15,000                               |
| 5       | 5 to < 10                     | 25,000                                | 37,500                               |

|    |                |          |           |
|----|----------------|----------|-----------|
| 6  | 10 to < 15     | 37,500   | 65,000    |
| 7  | 15 to < 25     | 37,500   | 75,000    |
| 8  | 25 to < 50     | 50,000   | 1,00,000  |
| 9  | 50 to < 100    | 75,000   | 1,50,000  |
| 10 | 100 to < 500   | 1,50,000 | 3,00,000  |
| 11 | 500 to < 1000  | 2,50,000 | 5,00,000  |
| 12 | 1000 to < 5000 | 3,50,000 | 7,00,000  |
| 13 | 5000 and above | 5,00,000 | 10,00,000 |

**NOTE:** (1) In case of late application, the revised fee structure as on date of application will be applicable.

(2) CTE Fees shall be levied either under Air Act OR under Water Act as Applicable.

"TABLE -B"

[(See rule 9(2))]

**PROCESSING FEES FOR CCA UNDER AIR ACT, 1981**

| Sr. No. | Sector of Industry  |                   | Existing Fees Fixed in 1998-99 (Rs/Year) | Fees for Large Category (Rs/Year) | Fees for Medium Category (Rs/Year) |
|---------|---|-------------------|--|-----------------------------------|------------------------------------|
| 1       | Asbestos and Asbestos Products  |                   | 10,000                                   | 20,000                            | 15,000                             |
| 2       | Cement, Cement Products   |                   |  |                                   |                                    |
|         | (a) Plant with production capacity up to 200 MT/day                   |                   | 5,000                                    | 10,000                            | 10,000                             |
|         | (b) Plant with Production capacity >200 to 1000 MT/day                |                   | 10,000                                   | 20,000                            | 20,000                             |
|         | (c) Plant with Production capacity > 1000 MT/day                      |                   | —  | 40,000                            | 40,000                             |
| 3       | Ceramic and Ceramic Products  | With gasifire     | 1,000                                    | 7,500                             | 5,000                              |
|         |   |                   | 2,000                                    |                                   |                                    |
|         |   | Without gasifire  | -  | 6000                              | 4000                               |
| 4       | Chemicals and allied Products   |                   | 10,000                                   | 20,000                            | 15,000                             |
| 5       | Engineering   |                   |  |                                   |                                    |
|         | (a) Without heat treatment and electroplating                         |                   | 1,500                                    | 4000                              | 3,000                              |
|         |   |                   | 2,000                                    |                                   |                                    |
|         | (b) With heat treatment   |                   | 2,500                                    | 6,000                             | 4,000                              |
|         | (c) With electroplating   |                   | 2,500                                    | 7,500                             | 5,000                              |
|         | (d) With both (Heat Treatment and Electroplating)                     |                   | 5,000                                    | 10,000                            | 7,500                              |
| 6       | Ferrous and non-ferrous metals  |                   | 10,000                                   | 20,000                            | 15,000                             |
| 7       | Fertilizer  |                   | 7,500                                    | 20,000                            | 12,500                             |
| 8       | Foundry   |                   | 5,000                                    | 10,000                            | 7,500                              |
| 9       | Food and Agricultural products  |                   | 2,000                                    | 4,000                             | 3,000                              |
| 10      | Mining Activity   |                   | 10,000                                   | 20,000                            | 15,000                             |
| 11      | Ores/Mineral Processing, including Beneficiation, Pelletization, etc. |                   | 10,000                                   | 20,000                            | 15,000                             |
| 12      | Power Generation  | Upto 50 MW        | 10,000                                   | Rs. 20,000 /Yr.                   |                                    |
|         |   | >50 & upto 500 MW |  | Rs. 30,000 /Yr.                   |                                    |
|         |   | > 500 MW          |  | Rs. 40,000 /Yr.                   |                                    |
| 13      | Paper and pulp (including paper products)                             |                   | 5,000                                    | 10,000                            | 7,500                              |

| Sr. No. | Sector of Industry  | Existing Fees Fixed in 1998-99 (Rs/Year) | Fees for Large Category (Rs/Year)   | Fees for Medium Category (Rs/Year) |
|---------|---|--|-------------------------------------|------------------------------------|
| 14      | Activities in Textile Sector  | 5,000                                    | 10,000                              | 7,500                              |
| 15      | Petroleum Refinery  | 5,000                                    | 20,000                              | 10,000                             |
| 16      | Petroleum products and petrochemicals   | 10,000                                   | 20,000                              | 15,000                             |
| 17      | Recovery of waste   | 5,000                                    | 10,000                              | 7,500                              |
| 18      | Incinerator   | 10,000                                   | 20,000                              | 15,000                             |
| 19      | Tyre, rubber Products   | 5,000                                    | 20,000                              | 10,000                             |
| 20      | Small scale industry of any Sector<br>(a) Red Category<br>(b) Orange Category<br>(c) Green Category | 2,000                                    | (a) 4,000<br>(b) 3,000<br>(c) 2,000 |                                    |
| 21      | Any other industrial plant not covered in serial 1 to 20 above                                      | Large Scale                              | 20,000                              | 10,000                             |
|         |   | Medium Scale                             |                                     |                                    |

By order and in the name of the Governor of Gujarat,

**PRADEEP SINGH,**

Joint Secretary to Government.

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# The Gujarat Government Gazette

## EXTRAORDINARY

### PUBLISHED BY AUTHORITY

Vol. LIX ] WEDNESDAY, OCTOBER 17, 2018/ASVINA 25, 1940

Separate paging is given to this Part in order that it may be filed as a Separate Compilation.

#### PART IV-A

Rule and Orders (Other than those published in Parts I, I-A, and I-L) made  
by the Government of Gujarat under the Central Acts

#### FOREST AND ENVIRONMENT DEPARTMENT

#### Notification

Sachivalaya, Gandhinagar, 29<sup>th</sup> September, 2018

#### WATER (PREVENTION & CONTROL OF POLLUTION) ACT, 1974

No.GVN/12/102018/309/E.- In exercise of the power conferred by Section 64 of the Water (PREVENTION & CONTROL OF POLLUTION) ACT, 1974 (6 of 1974), the Government of Gujarat in Consultation with the Gujarat Pollution Control Board hereby makes the following Rules further to amend the Gujarat Water (PREVENTION & CONTROL OF POLLUTION) ACT, 1976 namely.

- (a) These rules may be called the Gujarat Water (PREVENTION & CONTROL OF POLLUTION) (Amendment) Rules, 2018.
- (b) They shall come into force on & with effect from the date of their publication in the Official Gazette.
- In the Gujarat Water (PREVENTION & CONTROL OF POLLUTION) Rules - 1988, in rule 21-A in Sub-rule (1) the table shall be substituted with following tables, namely: -

"TABLE -A"

#### PROCESSING FEES FOR CTE

| Sr. No. | Investment (Rs. In Crores) | Existing Rate of NOC Fees (in Rs.) | Revised Rate of NOC Fees (in Rs.) |
|---------|----------------------------|------------------------------------|-----------------------------------|
| 1       | 0 to < 0.25                | 1,500                              | 2,000                             |
| 2       | 0.25 to < 0.5              | 2,500                              | 3,000                             |
| 3       | 0.5 to < 1                 | 5,000                              | 6,000                             |
| 4       | 1 to < 5                   | 12,500                             | 15,000                            |
| 5       | 5 to < 10                  | 25,000                             | 37,500                            |
| 6       | 10 to < 15                 | 37,500                             | 65,000                            |
| 7       | 15 to < 25                 | 37,500                             | 75,000                            |



| Sr. No. | Investment<br>(Rs. In Crores) | Existing Rate of NOC Fees<br>(in Rs.) | Revised Rate of NOC Fees<br>(in Rs.) |
|---------|-------------------------------|---------------------------------------|--------------------------------------|
| 8       | 25 to < 50                    | 50,000                                | 1,00,000                             |
| 9       | 50 to < 100                   | 75,000                                | 1,50,000                             |
| 10      | 100 to < 500                  | 1,50,000                              | 3,00,000                             |
| 11      | 500 to < 1000                 | 2,50,000                              | 5,00,000                             |
| 12      | 1000 to < 5000                | 3,50,000                              | 7,00,000                             |
| 13      | 5000 and above                | 5,00,000                              | 10,00,000                            |

**NOTE:** (1) In case of late application, the revised fee structure as on date of application will be applicable.

(2) CTE Fees shall be levied either under Air Act OR under Water Act as Applicable.

"TABLE-B"

**PROCESSING FEES FOR CCA UNDER WATER ACT, 1974**

| Sr. No. | Water Consumption<br>KL/Day | Existing Rate<br>of CCA Fees<br>(in Rs.) | Fees for<br>Red Category<br>(Rs/Year) | Fees for Orange<br>Category<br>(Rs/Year) | Fees for Green<br>Category<br>(Rs/Year) |
|---------|-----------------------------|--|---------------------------------------|--|---|
| 1       | 0 to < 10                   | 1,000                                    | 2,000                                 | 1,800                                    | 1,500                                   |
| 2       | 10 to < 20                  | 1,500                                    | 3,000                                 | 2,700                                    | 2,250                                   |
| 3       | 20 to < 30                  | 2,000                                    | 4,000                                 | 3,500                                    | 3,000                                   |
| 4       | 30 to < 50                  | 2,500                                    | 5,000                                 | 4,400                                    | 3,750                                   |
| 5       | 50 to < 100                 | 3,000                                    | 6,000                                 | 5,300                                    | 4,500                                   |
| 6       | 100 to < 500                | 5,000                                    | 10,000                                | 8,800                                    | 7,500                                   |
| 7       | 500 to < 1,000              | 10,000                                   | 20,000                                | 17,500                                   | 15,000                                  |
| 8       | 1,000 to < 5,000            | 20,000                                   | 40,000                                | 35,000                                   | 30,000                                  |
| 9       | 5,000 to < 10,000           | 30,000                                   | 60,000                                | 52,500                                   | 45,000                                  |
| 10      | 10,000 and above            | 30,000                                   | 1,00,000                              | 87,500                                   | 75,000                                  |

By order and in the name of the Governor of Gujarat,

**PRADEEP SINGH,**  
Joint Secretary to Government.

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## EXTRAORDINARY

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### PART IV-A

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by the Government of Gujarat under the Central Acts

#### HOME DEPARTMENT

##### Notification

Sachivalaya, Gandhinagar, 8<sup>th</sup> October, 2018

##### Constitution of India.

**NO.GG-78/2018/JLM/502017/3484/J:-** In exercise of the powers conferred by the proviso to article 309 of the Constitution of India, the Governor of Gujarat hereby makes the following rules to provide for regulating the conditions of service of persons directly recruited to the post of Office Superintendent, Class III, in the subordinate service of the Jail Department, in so far as they relate to their Pre-service Training and passing of the Post-Training Examination, namely: -

##### 1. Short title, extent and commencement.-

- (1) These rules may be called the Office Superintendent, Class III, (Jail Department) (Condition of service relating to Pre-service Training and passing of post-training examination) Rules, 2018.
- (2) They shall come into force from the date of their publication in the Official Gazette.
- (3) They shall apply to the persons directly recruited as Office Superintendent, Class III, in the subordinate service of the Jail Department, otherwise than by promotion from lower post.

##### 2. Definitions.-

In these rules, unless the context otherwise requires,-

- (a) "Appendix" means the Appendix appended to these rules;
- (b) "Director General" means the Director General of the Sardar Patel Institute of Public Administration (SPIPA);
- (c) "direct recruit" means a person appointed on contractual basis on the post of Office Superintendent, Class III, in the subordinate service of Jail Department, on the recommendation of the Gujarat Subordinate Service Selection Board, Gandhinagar through competitive examination;

- (d) "Institute" means the Sardar Patel Institute of Public Administration (SPIPA);
- (e) "post-training examination" means the examination held by the Sardar Patel Institute of Public Administration (SPIPA) that has imparted Pre-service training to the direct recruits;
- (f) "specified chances" means the number of chances specified in these rules within which person is required to pass the post-training examination;
- (g) "specified period" means the period specified in these rules within which a person is required to pass the post-training examination.

**3. Institutional training and scheme of examination.-** the direct recruits shall be required to undergo institutional training in the institute in accordance with the following provisions, namely: -

- (1) The institutional training shall be for the period of six weeks. This training shall be imparted by the Institute.
- (2) The direct recruits shall be under the control of the Director General of Institute during the period of their institutional training.
- (3) The post-training examination shall be held by the Institute after the institutional training period is over. The direct recruits who have completed the institutional training programme shall be required to pass the post-training examination. After completion of the institutional training, the direct recruits shall be required to work in their respective offices until their post-training examination.
- (4) The post-training examination shall consist of five papers. Each paper shall be of 100 (one hundred) marks. The syllabus of each paper shall be as specified in Appendix-I.
- (5) The post-training examination shall consist of Multiple Choice questions (MCQS) except Paper-4, which shall be descriptive type. Answers of paper 4 shall be required to be written in English or Gujarati or as per the instructions given in the question paper.
- (6) The candidate shall be allowed to answer the question of papers 1 to 3 and 5 with the help of books except paper 4 which shall be without books.

**Explanation.-** 'With books' means original book of the subject approved by the Government or the Institute from time to time which includes bare Acts and/or Rules without any commentaries or case laws and includes manual issued under the Act and published by the Government of Gujarat.

- (7) (a) The direct recruits shall be required to pass the post-training examination within not more than three attempts during within a period of five years of his service on contractual basis.  
(b) Not appearing in the examination, shall be considered as an attempt:

Provided that the persons belonging to the Scheduled Castes or Scheduled Tribes may be allowed one additional chance which shall be required to be availed of within a period of one year from the date of declaration of the result of the post-training examination at which the last normal chance have been availed of.

- (8) If a direct recruit fails to pass the post-training examination in the specified period and specified chances as required under these rules, his service shall liable to be terminated:

Provided that if, the State Government is satisfied that a person could not pass the post-training examination within the specified period and specified chances for the reason beyond his control, it may, after recording reason in writing allow him not more than two additional chances to pass such examination on payment of an examination fees as may be determined by the Government from time to time:

Provided further that, if a person passes the post-training examination after availing the additional chances, he shall not be entitled to claim seniority over those persons who have passed such examination earlier than him within the specified period and specified chances.

(9) In the circumstances mentioned in sub-rule (7) and sub-rule (8) above, if the post-training examinations are not conducted in time or result thereof could not be declared before the period of service on his contractual basis is over, the said period shall be deemed to have been extended till the declaration of the result of examination of the last additional chance availed to him.

**4. Eligibility to appear in examination.-** (1) In order to qualify for appearing at the examination, a direct recruit shall be required to attend a minimum of 85% of the total number of lectures in the institutional training otherwise he shall be disqualified for appearing in the examination and shall be liable to be terminated from his contractual post.

(2) During the period of Institutional training, a direct recruit shall not be allowed any type of leave of absence for more than three days. If the direct recruit remains absent for more than three days and the Director General of the Institute is satisfied that his absence is not due to any unavoidable circumstances beyond his control; he may direct to deduct the pay of the direct recruit for the days of his absence.

**5. Books for Institutional training.-** The Institute shall provide books for institutional training and post-training examination to the direct recruits without obtaining any security deposit during their institutional training in the Institute. The direct recruits shall be required to return the books as soon as the post-training examination is over. In case of their loss or damage, price of the books shall be recovered from the direct recruits by the Institute.

**6. Prohibition to use certain device in the Examination Hall.-** No direct recruit shall be allowed to carry with him any type of electronic communication devices like cellular phone, lap top, i-pad, calculator, etc. in the examination hall.

**7. Qualifying Standard.-** (1) The standard for passing the post-training examination shall be of fifty per cent of the total marks assigned to each paper.

(2) An unsuccessful candidate who secured sixty percent or more marks in one or more papers shall be exempted from appearing in that or those papers at the subsequent examinations.

(3) The direct recruit shall not be entitled to any travelling allowance for the journey performed by him to attend institutional training and/or to appear in the post-training examination.

**8. Publication of Result.-** The Director General, shall declare the result of post-training examination and shall submit the same to the Government. The Government shall publish the same in the Official Gazette.

**9. Security and surety Bond.-** Every direct recruit shall be required to execute a bond in the form as specified in Appendix-II.

**10. Miscellaneous Provisions.-** The Director General shall be entitled to change or alter the training Schedule of the post-training examination as per the prevailing circumstances.

#### **APPENDIX -1**

**(see rule 3(4))**

Syllabus for pre-service training and post-training examination for the direct recruits Office Superintendent, Class-III, in the subordinate service of the Jail Department.

**Paper I: Constitution of India and Service Matters. Marks: 100,  
Duration:2 Hours (with Books)**

1. The Constitution of India (Fundamental Rights, Directive Principles Articles-32, 226, 309, 310, 311 and 320,).
2. The Gujarat Civil Services (Conduct) Rules, 1971 and Gujarat Civil Services (Discipline and Appeal) Rules, 1971
3. The Panchayati Raj and structure of Panchayati Raj in Gujarat.

4. The Prevention of Corruption Act, 1988

**Paper II: Financial Matters, Marks: 100, Duration:2 Hours, (with Books)**

1. The Gujarat Civil Service Rules (G.C.S.R.), 2000; Vol. I to VIII.
2. The Gujarat Budget Manual, Part I and II.
3. The Gujarat Financial Rules, 1971.
4. The Bombay Contingent Expenditure Rules.
5. The Gujarat Treasury Rules, 2000 (Related Rules).

**Paper III: Office Procedure, Marks: 100, Duration:2 Hours (with Books)**

1. Manual of Office Procedure (Non-Secretariat).
2. Rules of Business and instructions there under.
3. Set up of the machinery of Government.
4. Confidential Report Rules and Guidelines.
5. The Right to Information Act, 2005 (with all amendments)
6. The Gujarat Civil Service Classification and Recruitment (General) Rules, 1967.

**Paper IV: GUJARATI - ENGLISH LANGUAGE**

**Marks: 100, Duration:3 Hours;**

**(Without Books)**

- |  |          |
|--|----------|
| 1. Translation from English to Gujarati and from Gujarati to English | 25 Marks |
| 2. Noting and Drafting in Gujarati or English                        | 25 Marks |
| 3. Gujarati Grammar  | 25 Marks |
| 4. English Grammar   | 25 Marks |

**Paper V: Departmental Matters Marks: 100, Duration: 2 Hours (with Books)**

- (1) Bombay Jail Manual
- (2) Prisons Act, 1894
- (3) Prisoners Act, 1900
- (4) Bombay Jail Accounts Manual.

**APPENDIX II**

**(See rule 9)**

**SECURITY BOND**

Know all men by these presents that I .....  
 ..... a candidate selected for appointment to the post of  
 ..... on contractual basis in accordance with the  
 rules contained in Government Notification,.....Department,  
 No ..... dated the ..... (hereinafter referred to  
 as "the rules") an held and firmly bound up; to the Government of Gujarat exercising the executive

power of the Governor of the State of Gujarat (hereinafter referred to as "the Government" which expression shall, unless the context otherwise requires, include his successors in office and assigns) in the amount equal to pay and allowances paid to me by the Government during my training and amount prescribed by the Government from time to time towards the cost of training imparted to me by the Institute. Being an expenditure incurred by the Government to my training and which is to be paid to the Government for which payment, well and truly to be made I bind myself, my heirs, executors, administrators and legal representatives by these presents ..... whereas I am required under the rules to execute a bond for refund, to the Government, of the amount equal to pay and usual allowances drawn by me during the training in the event of my (a) failure to complete the institutional training or (b) failure to appear in the post-training examination or (c) failure to comply with any of the provisions of the contractual rules, if any, to the satisfaction of the Government, or (d) quitting service before the completion of the period of 3 years from the date of my regular appointment on satisfactory completion of the contractual period. Now, the condition of the above written bond is that if, I duly and faithfully observe and perform the stipulations and conditions on my part to be observed and performed as contained in the said rules (which rules shall be deemed to form part of these presents,) then the above written bond shall be void, otherwise the same shall remain in force and effect:

Provided that without prejudice to other right or remedies, it shall be open to the Government to recover the amount payable under this bond as arrears of land revenue.

In witness whereof I have here to set my hand this day ..... of ..... 20 .....

Signature of the candidate

Signed and delivered by the above named in the presence of: -

1. Signature and full address :
2. Signature and full address :

### SURETY

We ..... and ..... residing at ..... in taluka ..... district ..... declare ourselves sureties for the above named ..... (hereinafter referred to as "the candidate") and guarantee that the candidate shall do and perform all that he has undertaken to do and perform and in case of his (1) failure to complete the institutional training or (2) failure to appear in the post-training examination, or (3) failure to comply with any of the provisions of the contractual rules, if any, to the satisfaction of the Government or (4) quitting service before the completion of the period of 3 years from the date of his regular appointment on satisfactory completion of the contractual period. We hereby bind ourselves jointly and severally to forfeit to the Government of Gujarat exercising the executive power of the Governor of the State of Gujarat (hereinafter referred to as "the Government") the amount equal to the pay and allowances paid to him by the Government during his training plus

amount prescribed by the Government from time to time towards the cost of training imparted to him by the Institute. Being an expenditure incurred by the Government on his training in which the candidate has bound himself and we agree that the Government may, without prejudice to other rights or remedies available to the Government recover the said amount from us as arrears of land revenue; and we also agree that any variation of the terms and conditions specified in the said rules will not discharge us from our liabilities to pay the said amount and for the purpose of enforcement of our liability under this agreement, our liability will be joint and several with that of the candidate.

Dated this ..... day of ..... 20 ..... signed and delivered by the said.

Date:

Place :

Signature of Surety

Full address and occupation

Date:

Place :

Signature of Surety

Full address and occupation

In the presence of:

Signature

Full address and Occupation of witness.

Signature

Full address and Occupation of witness.

By order and in the name of the Governor of Gujarat,

**MAHENDRA R. SONI,**  
Deputy Secretary to Government.

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# The Gujarat Government Gazette

## EXTRAORDINARY

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Vol. LIX ]

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### PART IV-A

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by the Government of Gujarat under the Central Acts

#### FOREST AND ENVIRONMENT DEPARTMENT

##### Notification

Sachivalaya, Gandhinagar, 19<sup>th</sup> October, 2018

##### Indian Forest Act 1927 (XVI OF 1927)

**GVN/2018-(13)/JJM/15-04/18/GSF-11/F.** In Exercise of the Powers conferred by the Section-20 of the Indian Forest Act, 1927(XVI OF 1927) in its Application to the State of Gujarat. The Government of Gujarat is pleased with reference of the Government Forest and Environment Department Notification No:-AVN-21/87/JJM/1287/50/V-3 dated: 22.01.1987 Published in Gujarat Government Gazette Part-1 Dated: 09.04.1987 on page no. 554 to 556 to declare the land in Anjar Taluka of Kutch District specified in the schedule here under appended, to be "RESERVED FOREST" with effect from the date of issue of this Notification.



**SCHEDULE****Taluka : Anjar****District : Kutch**

| Sr. No | Name of Village | Survey No    | AREA          |               | Boundaries   |
|--------|-----------------|--------------|---------------|---------------|--|
|        |                 |              | A.G           | H.A           |  |
| 1      | 2               | 3            | 4             | 5             | 6  |
| 1      | Chandrani       | 584 Paiki    | 370.27        | 150.00        | North: Open land of S.No.584 Paiki, S.No. 396, 393, 392, Open land of T.S.No.584 Paiki, S.No.356, 352-1, 353, 354, 355, Open land of T.S.No.584 Paiki, S.No.312 and Road.<br>East: Boundary of village Tappar.<br>South : Open land of S.No.584 Paiki and S.No.357<br>West: S.No.410 |
|        |                 | <b>Total</b> | <b>370.27</b> | <b>150.00</b> |  |

By order and in the name of the Governor of Gujarat,

**MANISH C. SHAH,**

Under Secretary to Government.

વન અને પર્યાવરણ વિભાગ

જાહેરનામું

સચિવાલય, ગાંધીનગર, ૧૯મી ઓક્ટોબર, ૨૦૧૮.

ક્રમાંક: ગવન/૨૦૧૮-(૧૪)/જજમ/૧૫-૦૪/૧૮/જીએસએફ-૧૧/એફ ગુજરાત રાજ્યને લાગુ હોય તેટલે સુધી સને ૧૯૨૭ ના ભારતનાં જંગલો બાબતોનાં (સને ૧૯૨૭ ના ૧૬ માં) અધિનિયમની કલમ ૨૦ થી મળેલા અધિકારો અન્વયે ગુજરાત સરકાર ગુજરાત રાજ્ય પત્રના તા.૦૯.૦૭.૧૯૮૭ના પાના નં. ૫૫૪ થી ૫૫૬ પર પ્રસિદ્ધ કરેલી તા.૨૨.૦૧.૧૯૮૭ના વન અને પર્યાવરણ વિભાગની અધિસૂચના ક્રમાંક: અવન-૨૧/૮૭/જજમ/૧૨૮૭/૫૦/૫-૩ના અનુસંધાનમાં આ સાથે જોડેલી અનુસૂચિમાં નિર્દિષ્ટ કરેલ કચ્છ જિલ્લાના અંજાર તાલુકાની જમીનને આ અધિસૂચના પ્રસિદ્ધ થયાની તારીખથી “અનામત જંગલ” તરીકે જાહેર કરે છે.

અનુસૂચિ

તાલુકો: અંજાર

જિલ્લો: કચ્છ

| અ.નં. | ગામનું નામ | સર્વે નંબર   | વિસ્તાર       |               | ચતુ:સીમા  |
|-------|------------|--------------|---------------|---------------|---|
|       |            |              | એ-ગુંઠા       | હે-આર         |   |
| ૧     | ૨          | ૩            | ૪             | ૫             | ૬   |
| ૧     | ચાંદ્રાણી  | ૫૮૪ પૈકી     | ૩૭૦.૨૭        | ૧૫૦.૦૦        | ઉત્તર : સ.નં. ૫૮૪ પૈકી ખુદી જમીન તથા સ.નં. ૩૯૬, ૩૯૩, ૩૯૨, ટ્રા.સ.નં. ૫૮૪ પૈકી ખુદી જમીન તથા સ.નં. ૩૫૬, ૩૫૨-૧, ૩૫૩, ૩૫૪, ૩૫૫, ટ્રા.સ.નં. ૫૮૪ પૈકી ખુદી જમીન, સ.નં.૩૧૬ અને રસ્તો.<br>પૂર્વ : મોજે ટપ્પરનો સીમાડો<br>દક્ષિણ : સ.નં. ૫૮૪ પૈકી ખુદી જમીન અને સ.નં.૩૫૭<br>પ્રશ્ચિમ : સ.નં.૪૧૦ |
|       |            | <b>કુલ :</b> | <b>૩૭૦.૨૭</b> | <b>૧૫૦.૦૦</b> |   |

ગુજરાતના રાજ્યપાલશ્રીના હુકમથી અને તેમના નામે,

મનીષ સી. શાહ,

સરકારના ઉપસચિવ.

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સરકારી મધ્યસ્થ મુદ્રણાલય, ગાંધીનગર.



સત્યમેવ જયતે

# The Gujarat Government Gazette

**EXTRAORDINARY**  
**PUBLISHED BY AUTHORITY**

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TUESDAY, OCTOBER 23, 2018/KARTIKA 1, 1940

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## PART IV-A

**Rule and Orders (Other than those published in Parts I, I-A, and I-L) made  
by the Government of Gujarat under the Central Acts**

### FOREST AND ENVIRONMENT DEPARTMENT

#### Notification

Sachivalaya, Gandhinagar, 19<sup>th</sup> October, 2018

#### Indian Forest Act 1927 (XVI OF 1927)

**GVN/2018-(14)/JJM/15-05/18/GSF-12/F.** In Exercise of the Powers conferred by the Section-20 of the Indian Forest Act, 1927(XVI OF 1927) in its Application to the State of Gujarat. The Government of Gujarat is pleased with reference of the Government Forest and Environment Department Notification No:-AVN-60/87/FLD/1287/1240/V-3 dated: 24.04.1987 Published in Gujarat Government Gazette Part-1 Dated: 09.07.1987 on page no. 1291 to 1294 to declare the land in Rapar Taluka of Kutch District specified in the schedule here under appended, to be "RESERVED FOREST" with effect from the date of issue of this Notification.

#### SCHEDULE

Taluka : Rapar

District : Kutch

| Sr. No | Name of Village | Survey No | AREA   |        | Boundaries  |
|--------|-----------------|-----------|--------|--------|---|
|        |                 |           | A.G    | H.A    |   |
| 1      | 2               | 3         | 4      | 5      | 6   |
| 1      | Manaba Part-1   | 240 Paiki | 247.04 | 100.00 | North : Open land of T.S.No. 240 Paiki (Cultivated)<br>East : Open land of T.S.No. 240 Paiki (Cultivated), Marag, Open land of T.S.No. 240 Paiki. Boundary of Little rann of Kutch.<br>South : Salt Plots of T.S.No. 240 Paiki, Marag. Salt Plots of T.S.No. 240 Paiki<br>West : Boundary of village Shikarpur. |

|                  |              |               |               |  |
|------------------|--------------|---------------|---------------|--|
| Manaba<br>Part-2 | 240 Paiki    | 370.26        | 150.00        | North : S.No. 240 Paiki 56, S.No. 240 Paiki 13,<br>Open land of T.S.No. 240 Paiki,<br>Boundary of village Bhimdevka.<br>East : Boundary of Little rann of Kutch.<br>South : Boundary of Little rann of Kutch.<br>West : Open land of T.S.No. 240 Paiki, S.No.<br>240 Paiki 9, S.No. 240 Paiki 6, Open<br>land of T.S.No. 240 Paiki |
|                  | <b>Total</b> | <b>617.30</b> | <b>250.00</b> |  |

By order and in the name of the Governor of Gujarat,

**MANISH C. SHAH,**

Under Secretary to Government.

વન અને પર્યાવરણ વિભાગ

જાહેરનામું

સચિવાલય, ગાંધીનગર, ૧૯મી ઓક્ટોબર, ૨૦૧૮.

ક્રમાંક: ગવન/૨૦૧૮-(૧૪)/જજમ/૧૫-૦૫/૧૮/જીએસએફ-૧૨/એફ ગુજરાત રાજ્યને લાગુ હોય તેટલે સુધી સને ૧૯૨૭ ના ભારતના જંગલો બાબતોનાં (સને ૧૯૨૭ ના ૧૬ માં) અધિનિયમની કલમ ૨૦ થી મળેલા અધિકારો અન્વયે ગુજરાત સરકાર ગુજરાત રાજ્ય પત્રના તા.૦૯.૦૭.૧૯૮૭ના પાના નં. ૧૨૯૧ થી ૧૨૯૪ પર પ્રસિદ્ધ કરેલી તા.૨૪.૦૪.૧૯૮૭ના વન અને પર્યાવરણ વિભાગની અધિસૂચના ક્રમાંક: અવન-૬૦/૮૭/જજમ/૧૨૮૭/૧૨૪૦/૫-૩ના અનુસંધાનમાં આ સાથે જોડેલી અનુસૂચિમાં નિર્દિષ્ટ કરેલ કચ્છ જિલ્લાના રાપર તાલુકાની જમીનને આ અધિસૂચના પ્રસિદ્ધ થયાની તારીખથી “અનામત જંગલ” તરીકે જાહેર કરે છે.

અનુસૂચિ

તાલુકો: રાપર

જિલ્લો: કચ્છ

| અ.નં. | ગામનું નામ      | સર્વે નંબર | વિસ્તાર |        | ચતુ:સીમા  |
|-------|-----------------|------------|---------|--------|---|
| ૧     | ૨               | ૩          | ૪       | ૫      | ૬   |
| ૧     | માણાબા<br>ભાગ-૧ | ૨૪૦ પૈકી   | ૨૪૭.૦૪  | ૧૦૦.૦૦ | ઉત્તર : સ.નં. ૨૪૦ પૈકી ખુદી જમીન (ખેડવાણ)<br>પૂર્વ : સ.નં. ૨૪૦ પૈકી ખુદી જમીન (ખેડવાણ),<br>મારગ, સ.નં. ૨૪૦ પૈકી ખુદી જમીન, લાગુ<br>કચ્છનું નાનું રણ<br>દક્ષિણ : સ.નં. ૨૪૦ પૈકી મીઠાના પ્લોટ, મારગ,<br>સ.નં. ૨૪૦ પૈકી લાગુ મીઠાના પ્લોટ<br>પ્રશ્ચિમ: મોજે શિકારપુરનો સીમાડો                |
| ૨     | માણાબા<br>ભાગ-૨ | ૨૪૦ પૈકી   | ૩૭૦.૨૬  | ૧૫૦.૦૦ | ઉત્તર : સ.નં. ૨૪૦ પૈકી ૫૬, ૨૪૦ પૈકી ૧૩,<br>ટ્રા.સ.નં. ૨૪૦ પૈકી ખુદી જમીન, મોજે<br>ભીમદેવકાનો સીમાડો<br>પૂર્વ : લાગુ કચ્છનું નાનું રણ<br>દક્ષિણ: લાગુ કચ્છનું નાનું રણ<br>પ્રશ્ચિમ: ટ્રા.સ.નં. ૨૪૦ પૈકી ખુદી જમીન,<br>સ.નં. ૨૪૦ પૈકી ૯, સ.નં. ૨૪૦ પૈકી ૬,<br>ટ્રા.સ.નં. ૨૪૦ પૈકી ખુદી જમીન |
|       |                 | કુલ :      | ૬૧૭.૩૦  | ૨૫૦.૦૦ |   |

ગુજરાતના રાજ્યપાલશ્રીના હુકમથી અને તેમના નામે,

મનીષ સી. શાહ,  
સરકારના ઉપસચિવ.

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સરકારી મધ્યસ્થ મુદ્રણાલય, ગાંધીનગર.



સત્યમેવ જયતે

# The Gujarat Government Gazette

## EXTRAORDINARY

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### PART IV-A

Rule and Orders (Other than those published in Parts I, I-A, and I-L) made  
by the Government of Gujarat under the Central Acts

#### FOREST AND ENVIRONMENT DEPARTMENT

#### Notification

Sachivalaya, Gandhinagar, 19<sup>th</sup> October, 2018.

#### Indian Forest Act, 1927 (XVI OF 1927)

**GVN/2018-(15)/JJM/15-07/18/GSF-16/F.--** In Exercise of the Powers conferred by the Section-20 of the Indian Forest Act. 1927(XVI OF 1927) in its Application to the State of Gujarat. The Government of Gujarat is pleased with reference of the Government Forest and Environment Department Notification No:-AVN-41/87/JJM/1287/471/V3 dated: 19.02.1987 Published in Gujarat Government Gazette Part-1 dated:30/04/1987 on page no. 704 to 708 is pleased to declare the land in Bhachau Taluka of Kutch District specified in the schedule here under appended, to be "RESERVED FOREST" with effect from the date of issue of this Notification.

#### SCHEDULE

**Taluka : Bhachau**

**District : Kutch**

| Sr. No. | Name of Village | Survey No               | AREA             |                 | Boundaries  |
|---------|-----------------|-------------------------|------------------|-----------------|---|
|         |                 |                         | A.G              | H.A             |   |
| 1       | 2               | 3                       | 4                | 5               | 6   |
| 1       | Bhachau         | 2000 Paiki<br>Part-A, H | 417.27<br>123.24 | 169.03<br>50.02 | North : S.No. 938, 939, 940, 945/1,<br>945/2.950.951.954. 953, 952,<br>Gauchar. S.No. 1025,1024,<br>1024/1<br><br>East : Open land of T.S.No. 2000 Paiki<br>South : S.No. 1146, 1145, 1144/1, 1930.<br>1128/1, 1128/2, 1127, 1124/1-2,<br>1125, 1126/1, 1115/1, 1114,<br>Open land of T. S. No. 2000 Paiki.<br>1032/1/2P, 1032/1/P. Marag |

| Sr. No. | Name of Village | Survey No            | AREA            |               | Boundaries   |
|---------|-----------------|----------------------|-----------------|---------------|--|
|         |                 |                      | A.G             | H.A           |  |
| 1       | 2               | 3                    | 4               | 5             | 6  |
|         |                 |                      |                 |               | West : S.No. 1031, 1030/P2, 1030/P1, 1026, 1027, Boundary of Village Chopadva.   |
|         |                 | 2000 Paiki Part-B    | 65.39           | 26.70         | North : S.No. 2042, Open land of T.S. No. 2000 Paiki. S.No. 2000/P 86. Open land of T.S.No. 2000 Paiki.12000/P/1, Open land of T.S.No. 2000 Paiki<br>East : Open land of T.S.No. 2000 Paiki, Industry S.No. 2000/P3<br>South : Open land of T.S.No. 2000 Paiki<br>West : Marag   |
|         |                 | 2000 Paiki Part-C, D | 192.33<br>12.04 | 78.03<br>4.90 | North : Open land of T.S. No.2000 Paiki<br>East : Open land of T.S.No. 2000 Paiki, S.No. 1431, 1432, 1433/1, 1433/P1-P2, Marag, 1441/1, 1440, 1438/2, 1436, 1435, 1465/2, 1467, 1468<br>South : S.No. 1377/2-1, 1381, 1382/1, 1382/2, 1385/2, 1385/1, 1386, 1387, 1388, 1388/1, Open land of T.S.No. 2000 Paiki, S.No. 1426/2, 1427/2, 1427/1, 1428, 1429, 1413/2,1411/2,<br>West : Marag S.No.1430/2, 1430/1, Marag |
|         |                 | 2000 Paiki Part-F, G | 20.23<br>41.04  | 8.33<br>16.63 | North : Open land of T.S.No. 2000 Paiki<br>East : Open land of T.S.No. 2000 Paiki<br>South : Open land of T.S.No. 2000 Paiki<br>West : Open land of T.S.No. 2000 Paiki   |
|         |                 | 2000 Paiki Part-E    | 25.07           | 1019          | North : Open land of T.S.No. 2000 Paiki<br>East : Open land of T.S.No. 2000 Paiki. S.No. 1619/1, 1618/3, 1618/2, 1618/1, 1612/1/P3, 1612/1/P2, River<br>South : River S.No. 1457<br>West : S.No. 1455, 1454, 1453/3, 1453/1, 1453/2, 1452  |
|         |                 | <b>Total:</b>        | <b>899.00</b>   | <b>363.83</b> |  |

By order and in the name of the Governor of Gujarat,

**MANISH C. SHAH,**  
Under Secretary to Government.

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## વન અને પર્યાવરણ વિભાગ

## જાહેરનામું

સચિવાલય, ગાંધીનગર, ૧૯મી ઓક્ટોબર, ૨૦૧૮.

**ક્રમાંક : ગવન/૨૦૧૮-(૧૫)-જજમ/૧૫-૦૭/૨૦૧૮/જાએસએફ-૧૬/એફ.**— ગુજરાત રાજ્યને લાગુ હોય તેટલે સુધી, સને ૧૯૨૭ના ભારતના જંગલો બાબતોના (સને ૧૯૨૭ના ૧૬માં) અધિનિયમની કલમ-૨૦ થી મળેલા અધિકારો અન્વયે ગુજરાત સરકાર ગુજરાત રાજ્ય પત્રના તા. ૩૦-૦૪-૧૯૮૭ ના પાના નં. ૭૦૪ થી ૭૦૮ પર પ્રસિધ્ધ કરેલી તા. ૧૯-૨-૧૯૮૭ના વન અને પર્યાવરણ વિભાગની અધિસૂચના ક્રમાંક : અવન-૪૧/૮૭/જજમ/૧૨૮૭/૪૭૧/વ-ક ના અનુસંધાનમાં આ સાથે જોડેલી અનુસૂચિમાં નિર્દિષ્ટ કરેલ કચ્છ જિલ્લાના ભચાઉ તાલુકાની જમીનને આ અધિસૂચના પ્રસિધ્ધ થયાની તારીખથી ‘અનામત જંગલ’ તરીકે જાહેર કરે છે.

## અનુસૂચિ

તાલુકો : ભચાઉ

જિલ્લો : કચ્છ

| અ. નં. | ગામનું નામ | સર્વે નંબર            | વિસ્તાર          |                 | ચતુ:સીમા   |
|--------|------------|-----------------------|------------------|-----------------|--|
|        |            |                       | એકર ગુંઠા        | હે.-આર          |  |
| ૧      | ૨          | ૩                     | ૪                | ૫               | ૬  |
| ૧      | ભચાઉ       | ૨૦૦૦ પૈકી<br>ભાગ-A, H | ૪૧૭.૨૭<br>૧૨૩.૨૪ | ૧૬૯.૦૩<br>૫૦.૦૨ | ઉત્તર : સ.નં. ૯૩૮, ૯૩૯, ૯૪૦, ૯૪૫/૧, ૯૪૫/૨,<br>૯૫૦, ૯૫૧, ૯૫૪, ૯૫૩, ૯૫૨, ગૌચર સ.નં.<br>૧૦૨૫, ૧૦૨૪, ૧૦૨૪/૧<br>પૂર્વ : ટ્રા.સ.નં. ૨૦૦૦ પૈકી ખુલ્લી જમીન<br>દક્ષિણ : સ.નં. ૧૧૪૬, ૧૧૪૫, ૧૧૪૪/૧, ૧૯૩૦,<br>૧૧૨૮/૧, ૧૧૨૮/૨, ૧૧૨૭, ૧૧૨૪/૧-૨,<br>૧૧૨૫, ૧૧૨૬/૧, ૧૧૧૫/૧, ૧૧૧૪, ટ્રા.સ.નં.<br>૨૦૦૦ પૈકી ખુલ્લી જમીન, ૧૦૩૨/૧/૨P,<br>૧૦૩૨/૧/P, મારગ<br>પશ્ચિમ : સ.નં. ૧૦૩૧, ૧૦૩૦/ P૨, ૧૦૩૦/ P૧, ૧૦૨૬,<br>૧૦૨૭, મોજે. ચોપડવાનો સીમાડો                           |
|        |            | ૨૦૦૦ પૈકી<br>ભાગ- B   | ૬૫.૩૯            | ૨૬.૭૦           | ઉત્તર : સ.નં. ૨૦૪૨, ટ્રા.સ.નં. ૨૦૦૦ પૈકી ખુલ્લી જમીન<br>સ.નં. ૨૦૦૦/ P ૮૬, ટ્રા.સ.નં. ૨૦૦૦ પૈકી<br>ખુલ્લી જમીન, ૨૦૦૦/P/૧, ટ્રા.સ.નં. ૨૦૦૦ પૈકી<br>ખુલ્લી જમીન<br>પૂર્વ : ટ્રા.સ.નં. ૨૦૦૦ પૈકી ખુલ્લી જમીન ઈન્ડસ્ટ્રી.<br>ટ્રા.સ.નં. ૨૦૦૦/ P ૩<br>દક્ષિણ : ટ્રા.સ.નં. ૨૦૦૦ પૈકી ખુલ્લી જમીન<br>પશ્ચિમ : મારગ   |
|        |            | ૨૦૦૦ પૈકી<br>ભાગ-C, D | ૧૯૨.૩૩<br>૧૨.૦૪  | ૭૮.૦૩<br>૪.૯૦   | ઉત્તર : ટ્રા.સ.નં. ૨૦૦૦ પૈકી ખુલ્લી જમીન<br>પૂર્વ : ટ્રા.સ.નં. ૨૦૦૦ પૈકી ખુલ્લી જમીન, સ.નં.૧૪૩૧,<br>૧૪૩૨, ૧૪૩૩/૧, ૧૪૩૩/ P1- P2, મારગ,<br>૧૪૪૧/૧, ૧૪૪૦, ૧૪૩૮/૨, ૧૪૩૬, ૧૪૩૫,<br>૧૪૬૫/૨, ૧૪૬૭, ૧૪૬૮.<br>દક્ષિણ : સ.નં. ૧૩૭૭/૨-૧, ૧૩૮૧, ૧૩૮૨/૧,<br>૧૩૮૨/૨, ૧૩૮૫/૨, ૧૩૮૫/૧, ૧૩૮૬,<br>૧૩૬૭, ૧૩૮૮, ૧૩૮૮/૧, ટ્રા.સ.નં. ૨૦૦૦ પૈકી<br>ખુલ્લી જમીન સ.નં. ૧૪૨૬/૨, ૧૪૨૭/૨,<br>૧૪૨૭/૧, ૧૪૨૮, ૧૪૨૯, ૧૪૧૩/૨, ૧૪૧૧/૨<br>પશ્ચિમ : મારગ સ.નં. ૧૪૩૦/૨, ૧૪૩૦/૧ મારગ |

| અ. નં. | ગામનું નામ | સર્વે નંબર            | વિસ્તાર        |               | ચતુ:સીમા  |
|--------|------------|-----------------------|----------------|---------------|---|
|        |            |                       | એકર ગુંઠા      | હે.-આર        |   |
| ૧      | ૨          | ૩                     | ૪              | ૫             | ૬   |
|        |            | ૨૦૦૦ પૈકી<br>ભાગ-F, G | ૨૦.૨૩<br>૪૧.૦૪ | ૮.૩૩<br>૧૬.૬૩ | ઉત્તર : ટ્રા.સ.નં. ૨૦૦૦ પૈકી ખુલ્લી જમીન<br>પૂર્વ : ટ્રા.સ.નં. ૨૦૦૦ પૈકી ખુલ્લી જમીન<br>દક્ષિણ : ટ્રા.સ.નં. ૨૦૦૦ પૈકી ખુલ્લી જમીન<br>પશ્ચિમ : ટ્રા.સ.નં. ૨૦૦૦ પૈકી ખુલ્લી જમીન  |
|        |            | ૨૦૦૦ પૈકી<br>ભાગ-E    | ૨૫.૦૭          | ૧૦.૧૮         | ઉત્તર : ટ્રા.સ.નં. ૨૦૦૦ પૈકી ખુલ્લી જમીન<br>પૂર્વ : ટ્રા.સ.નં. ૨૦૦૦ પૈકી ખુલ્લી જમીન, સ.નં.<br>૧૬૧૮/૧, ૧૬૧૮/૩, ૧૬૧૮/૨, ૧૬૧૮/૧,<br>૧૬૧૨/૧/ P૩, ૧૬૧૨/૧/ P૨, નદી<br>દક્ષિણ : નદી, સ.નં. ૧૪૫૭<br>પશ્ચિમ : સ.નં. ૧૪૫૫, ૧૪૫૪, ૧૪૫૩/૩, ૧૪૫૩/૧,<br>૧૪૫૩/૨, ૧૪૫૨ |
|        |            | કુલ                   | ૮૮૮.૦૦         | ૩૬૩.૮૩        |   |

ગુજરાતના રાજ્યપાલશ્રીના હુકમથી અને તેમના નામે,

મનીષ સી. શાહ,  
સરકારના ઉપ સચિવ.

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સત્યમેવ જયતે

# The Gujarat Government Gazette

## EXTRAORDINARY

PUBLISHED BY AUTHORITY

Vol. LIX ]

TUESDAY, OCTOBER 23, 2018/KARTIKA 1, 1940

Separate paging is given to this Part in order that it may be filed as a Separate Compilation.

### PART IV-A

Rule and Orders (Other than those published in Parts I, I-A, and I-L) made  
by the Government of Gujarat under the Central Acts

#### FOREST AND ENVIRONMENT DEPARTMENT

#### Notification

Sachivalaya, Gandhinagar, 19<sup>th</sup> October, 2018.

#### Indian Forest Act, 1927 (XVI OF 1927)

**GVN/2018-(16)/JJM/15-10/18/GSF-17/F.--** In Exercise of the Powers conferred by the Section-20 of the Indian Forest Act, 1927(XVI OF 1927) in its Application to the State of Gujarat. The Government of Gujarat is pleased with reference of the Government Forest and Environment Department Notification No:-GVN-2002/(20)/JJM-1290-2654-K dated: 24.10.2000 Published in Gujarat Government Gazette Part-1 dated: 12.11.2002 on page no. 107-1 to 107-2 to declare the land in Mandvi Taluka of Kutch District specified in the schedule here under appended, to be "RESERVED FOREST" with effect from the date of issue of this Notification

#### SCHEDULE

Taluka : Mandvi

District : Kutch

| Sr.<br>No. | Name of<br>Village     | Survey No  | AREA                    |                         | Boundaries  |
|------------|------------------------|--|-------------------------|-------------------------|---|
|            |                        |  | A.G                     | H.A                     |   |
| 1          | 2                      | 3  | 4                       | 5                       | 6   |
| 1          | Undhoth Moti<br>Part-1 | 785/2 140,<br>252,<br>(Old<br>S.No.427<br>paiki) | 3.05<br>260.11<br>73.14 | 1.26<br>105.33<br>29.63 | North : S.No. 130, 131, 133, 134, 135,<br>136, 137, 138.<br>East : Boundary of Village Ratadiya,<br>S.No. 139, Boundary of Village<br>Ratadiya and Godhdara.<br>South : Boundary of Village Godhara<br>West : Mandvi Marag, S.No. 257, 259,<br>257, 258, 254, 253, 250, Marag,<br>142, 143, 144, 145, 146, 147,<br>148, 150, 151,152,153,154,155. |



| Sr. No. | Name of Village     | Survey No                | AREA          |               | Boundaries   |
|---------|---------------------|--------------------------|---------------|---------------|--|
|         |                     |                          | A.G           | H.A           |  |
| 1       | 2                   | 3                        | 4             | 5             | 6  |
| 2       | Undhoth Moti Part-2 | 331 (Old S.No.427 Paiki) | 1.24          | 0.65          | North : S.No. 330<br>East : Mandvi Marag<br>South : Boundary of Village Godhara.<br>West : Corner of S.No. 356/1 and 330 |
|         |                     | <b>Total:</b>            | <b>338.14</b> | <b>136.93</b> |  |

By order and in the name of the Governor of Gujarat,

**MANISH C. SHAH,**

Under Secretary to Government.

વન અને પર્યાવરણ વિભાગ

જાહેરનામું

સચિવાલય, ગાંધીનગર, ૧૯મી ઓક્ટોબર, ૨૦૧૮.

**ક્રમાંક : ગવન/૨૦૧૮-(૧૬)-જજમ/૧૫-૧૦/૨૦૧૮/જાએસએફ-૧૭/એફ.-** ગુજરાત રાજ્યને લાગુ હોય તેટલે સુધી, સને ૧૯૨૭ના ભારતના જંગલો બાબતોના (સને ૧૯૨૭ના ૧૬માં) અધિનિયમની કલમ-૨૦ થી મળેલા અધિકારો અન્વયે ગુજરાત સરકાર ગુજરાત રાજ્ય પત્ર પ્રસિધ્ધ કરેલી તા. ૨૪-૧૦-૨૦૦૨ ના વન અને પર્યાવરણ વિભાગની અધિસૂચના ક્રમાંક : ગવન-૨૦૦૨/(૨૦)/જજમ/૧૨૮૦/૨૬૫૪-ક ના અનુસંધાનમાં આ સાથે જોડેલી અનુસૂચિમાં નિર્દિષ્ટ કરેલ કચ્છ જિલ્લાના માંડવી તાલુકાની જમીનને આ અધિસૂચના પ્રસિધ્ધ થયાની તારીખથી 'અનામત જંગલ' તરીકે જાહેર કરે છે.

અનુસૂચિ

તાલુકો : માંડવી

જિલ્લો : કચ્છ

| અ. નં. | ગામનું નામ       | સર્વે નંબર                            | વિસ્તાર                 |                         | ચતુ:સીમા   |
|--------|------------------|---------------------------------------|-------------------------|-------------------------|--|
|        |                  |                                       | એકર ગુંઠા               | હે.-આર                  |  |
| ૧      | ૨                | ૩                                     | ૪                       | ૫                       | ૬  |
| ૧      | ઉનડોઠ મોટી ભાગ-૧ | ૭૮૫/૨, ૧૪૦, ૨૫૨ (જુના સ.નં. ૪૨૭ પૈકી) | ૩.૦૫<br>૨૬૦.૧૧<br>૭૩.૧૪ | ૧.૨૬<br>૧૦૫.૩૩<br>૨૬.૬૮ | ઉત્તર : સ.નં. ૧૩૦, ૧૩૧, ૧૩૩, ૧૩૪, ૧૩૫, ૧૩૬, ૧૩૭, ૧૩૮<br>પૂર્વ : મોજે. રતડીયાનો સીમાડો, સ.નં. ૧૩૮, મોજે રતડીયા અને ગોધરાનો સીમાડો<br>દક્ષિણ : મોજે ગોધરાનો સીમાડો<br>પશ્ચિમ: માંડવી જવાની મારગ, સ.નં. ૨૫૭, ૨૫૮, ૨૫૭, ૨૫૮, ૨૫૪, ૨૫૩, ૨૫૦ મારગ, ૧૪૨, ૧૪૩, ૧૪૪, ૧૪૫, ૧૪૬, ૧૪૭, ૧૪૮, ૧૫૦, ૧૫૧, ૧૫૨, ૧૫૩, ૧૫૪, ૧૫૫ |
| ૨      | ભાગ-૨            | ૩૩૧ (જુના સ.નં. ૪૨૭ પૈકી)             | ૧.૨૪                    | ૦૦.૬૫                   | ઉત્તર : સ.નં. ૩૩૦<br>પૂર્વ : માંડવી મારગ<br>દક્ષિણ : મોજે. ગોધરાનો સીમાડો<br>પશ્ચિમ: સ.નં. ૩૫૬/૧, તથા ૩૩૦નો ખૂણો   |
|        |                  | <b>કુલ</b>                            | <b>૩૩૮.૧૪</b>           | <b>૧૩૬.૯૩</b>           |  |

ગુજરાતના રાજ્યપાલશ્રીના હુકમથી અને તેમના નામે,

**મનીષ સી. શાહ,**

સરકારના ઉપ સચિવ.

સરકારી મધ્યસ્થ મુદ્રણાલય, ગાંધીનગર.



सत्यमेव जयते

# The Gujarat Government Gazette

**EXTRAORDINARY**  
**PUBLISHED BY AUTHORITY**

Vol. LIX ]

WEDNESDAY, OCTOBER 24, 2018/KARTIKA 2, 1940

Separate paging is given to this Part in order that it may be filed as a Separate Compilation.

## PART IV-A

**Rules and Orders (Other than those published in Parts I, I-A, and I-L) made  
by the Government of Gujarat under the Central Acts**

### **FOOD, CIVIL SUPPLIES AND CONSUMER AFFAIRS DEPARTMENT NOTIFICATION**

Sachivalaya, Gandhinagar, 24<sup>th</sup> October, 2018.

#### **NATIONAL FOOD SECURITY ACT, 2013.**

**No. GTH/2018/28/PDS/10.2016/221/C-1 :-** WHEREAS certain draft rules were published as required by clause (f) of sub-section (2) of section 40 read with sub-section (5) of section 16 of the National Food Security Act, 2013 (20 of 2013), at pages 92-1 in the Gujarat Government Gazette Extraordinary part IV-A dated 18<sup>th</sup> August, 2018, under the Government Notification Food, Civil Supplies And Consumer Affairs Department, No. GTH/2018/22/PDS/10.2016/221/C-1, inviting objections or suggestions from all persons likely to be affected thereby within a period of thirty days from the date of publication of this notification in the official Gazette.

NOW, WHEREAS, no objections or suggestions have been received from the public on the said draft rules;

NOW, THEREFORE, In exercise of the powers conferred by clause (f) of sub-section (2) of section 40 read with sub-section (5) of section 16 of the National Food Security Act, 2013 (20 of 2013), the Government of Gujarat hereby makes the following rules, namely :-

1. These rules may be called the Gujarat State Food Commission (Procedure for Appointment of Chairperson, Members and staff and conditions of service) (Amendment) Rules, 2018.
2. In the Gujarat State Food Commission (Procedure for Appointment of Chairperson, Members and staff and conditions of service) Rules, 2017, in rule 4, in sub-rule (1), in clause (b), for the word "Secretary", the words "Deputy Secretary" shall be substituted.

By order and in the name of the Governor of Gujarat,

**KISHORKUMAR S. RANA,**  
Under Secretary to Government.



સત્યમેવ જયતે

# The Gujarat Government Gazette

## EXTRAORDINARY

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Vol. LIX ]

FRIDAY, OCTOBER 26, 2018/KARTIKA 4, 1940

Separate paging is given to this Part in order that it may be filed as a Separate Compilation.

### PART IV-A

Rule and Orders (Other than those published in Parts I, I-A, and I-L) made  
by the Government of Gujarat under the Central Acts

#### FOREST AND ENVIRONMENT DEPARTMENT

#### Notification

Sachivalaya, Gandhinagar, 24<sup>th</sup> October, 2018.

#### Indian Forest Act, 1927 (XVI OF 1927)

**GVN/2018-(17)/JJM/15-08/18/GSF-15/F.--** In Exercise of the Powers conferred by the Section-20 of the Indian Forest Act, 1927(XVI OF 1927) in its Application to the State of Gujarat. The Government of Gujarat is pleased with reference of the Government Forest and Environment Department Notification No:-GVN-2008/(50)/JJM-1008-SF-30-F dated: 03.10.2008 Published in Gujarat Government Gazette is pleased to declare the land in Abdasa Taluka of Kutch District specified in the schedule here under appended, to be "RESERVED FOREST" with effect from the date of issue of this Notification.

#### SCHEDULE

Taluka : Abdasa

District : Kutch

| Sr.<br>No. | Name of<br>Village | Survey No             | AREA                    |                         | Boundaries  |
|------------|--------------------|-----------------------|-------------------------|-------------------------|---|
|            |                    |                       | A.G                     | H.A                     |   |
| 1          | 2                  | 3                     | 4                       | 5                       | 6   |
| 1          | Khanay             | 295/1,<br>296,<br>297 | 41.32<br>48.24<br>50.24 | 16.91<br>19.66<br>20.47 | North : Boundary of Village Bandiya,<br>East : Marag<br>South : S.No. 28,293,27,294,62/2.<br>West : Marag |
|            |                    | <b>Total:</b>         | <b>141.00</b>           | <b>57.06</b>            |   |

By order and in the name of the Governor of Gujarat,

**MANISH C. SHAH,**  
Under Secretary to Government.

## વન અને પર્યાવરણ વિભાગ

## જાહેરનામું

સચિવાલય, ગાંધીનગર, ૨૪મી ઓક્ટોબર, ૨૦૧૮.

**ક્રમાંક : ગવન/૨૦૧૮-(૧૭)-જજમ/૧૫-૦૮/૧૮/જાએસએફ-૧૫/એફ.**— ગુજરાત રાજ્યને લાગુ હોય તેટલે સુધી, સને ૧૯૨૭ના ભારતના જંગલો બાબતોનાં (સને ૧૯૨૭ના ૧૬ માં) અધિનિયમની કલમ ૨૦ થી મળેલા અધિકારો અન્વયે ગુજરાત સરકાર ગુજરાત રાજ્ય પત્ર પ્રસિદ્ધ કરેલી તા. ૨૮.૧૨.૨૦૦૪ ના વન અને પર્યાવરણ વિભાગની અધિસૂચના ક્રમાંક : ગવન-૨૦૦૮/(૫૦)/જજમ/૧૦૦૮/એસ.એફ-૩૦-એફ ના અનુસંધાનમાં આ સાથે જોડેલી અનુસૂચિમાં નિર્દિષ્ટ કરેલ કચ્છ જિલ્લાના અબડાસા તાલુકાની જમીનને આ અધિસૂચના પ્રસિધ્ધ થયાની તારીખથી ‘અનામત જંગલ’ તરીકે જાહેર કરે છે.

## અનુસૂચિ પશ્ચિમ

તાલુકો : અબડાસા

જિલ્લો : કચ્છ

| અ. નં. | ગામનું નામ | સર્વે નંબર            | વિસ્તાર                 |                         | ચતુ:સીમા   |
|--------|------------|-----------------------|-------------------------|-------------------------|--|
|        |            |                       | એકર-ગુંઠા               | હે.-આર                  |  |
| ૧      | ૨          | ૩                     | ૪                       | ૫                       | ૬  |
| ૧      | ખાનાય      | ૨૮૫/૧,<br>૨૮૬,<br>૨૮૭ | ૪૧.૩૨<br>૪૮.૨૪<br>૫૦.૨૪ | ૧૬.૮૧<br>૧૮.૬૬<br>૨૦.૪૭ | ઉત્તર : મોજે. બાંડીયાનો સીમાડો.<br>પૂર્વ : મારગ<br>દક્ષિણ : સ.નં.૨૮,૨૮૩,૨૭,૨૮૪,૬૨/૨<br>પશ્ચિમ : મારગ |
|        |            | કુલ                   | ૧૪૧.૦૦                  | ૫૭.૦૬                   |  |

ગુજરાતના રાજ્યપાલશ્રીના હુકમથી અને તેમના નામે,

મનીષ સી. શાહ,  
સરકારના ઉપસચિવ.

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सत्यमेव जयते

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**EXTRAORDINARY**  
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FRIDAY, OCTOBER 26, 2018/KARTIKA 4, 1940

Separate paging is given to this Part in order that it may be filed as a Separate Compilation.

## PART IV-A

**Rule and Orders (Other than those published in Parts I, I-A, and I-L) made  
by the Government of Gujarat under the Central Acts**

### PORTS AND TRANSPORT DEPARTMENT

#### Notification

Sachivalaya, Gandhinagar, 23<sup>rd</sup> October, 2018

#### Motor Vehicles Act, 1988.

**No. PT/2018/19/MVD/102015/402/KH:-** The following draft of rules which is proposed to be issued under clause (a) of sub-section (2) of section 28 read with clause (a) of sub-section (2) of section 38 and clause (b) of sub-section (2) of section 65 of the Motor Vehicle Act, 1988 (59 of 1988) is published as required by sub-section (1) of section 212 of the said Act for the information of all persons likely to be affected thereby and notice is hereby given that the said draft of rules will be taken into consideration by the Government of Gujarat on or after the expiry of thirty days from the date of publication of this notification in the *Official Gazette*.

2. Any objection or suggestion which may be received by the Principal Secretary to the Government of Gujarat, Ports and Transport Department, Sachivalaya, Gandhinagar from any person with respect to the said draft rules on or before the expiry of the aforesaid period, will be considered by the Government.

#### DRAFT NOTIFICATION

No. PT/2018/19/MVD/102015/402/KH: In exercise of the powers conferred by clause (a) of sub-section (2) of section 28 read with clause (a) of sub-section (2) of section 38 and clause (b) of sub-section (2) of section 65 of the Motor Vehicles Act, 1988 (59 of 1988), the Government of Gujarat hereby makes the following rules further to amend the Gujarat Motor Vehicles Rules, 1989, namely:-

1. These rules may be called the Gujarat Motor Vehicles (2<sup>nd</sup> Amendment) Rules, 2018.
2. In the Gujarat Motor Vehicles Rules, 1989 (hereinafter referred to as "the said rules"), in rule 3, after entry (xxv), the following new entries shall be added, nameiy:-

"(xxvi) for the areas of district of Dang, the Assistant Regional Transport Officer, Aahwa;  
(xxvii) for the areas of district of Arvalli, the Assistant Regional Transport Officer, Modasa;  
(xxviii) for the areas of district of Gir Somnath, the Assistant Regional Transport Officer, Veraval;  
(xxix) for the areas of district of Botad, the Assistant Regional Transport Officer, Botad;  
(xxx) for the areas of district of Chhotaudepur, the Assistant Regional Transport Officer, Chhotaudepur;  
(xxxi) for the areas of district of Mahisagar, the Assistant Regional Transport Officer, Lunavada;  
(xxxii) for the areas of district of Morbi, the Assistant Regional Transport Officer, Morbi;  
(xxxiii) for the areas of district of Devbhumi Dwarka, the Assistant Regional Transport Officer, Khambhaliya;  
(xxxiv) for the areas of district of Ahmedabad(Rural) as specified in the Government Resolution No.MVD/2011/1467/Kh, Dated.29.04.2017, the Assistant Regional Transport Officer, Bavala."

3. In the said rules, in rule 24, after entry (xxv), the following entries shall be added, namely:-  
"(xxvi) for the areas of district of Dang, the Assistant Regional Transport Officer, Aahwa;  
(xxvii) for the areas of district of Arvalli , the Assistant Regional Transport Officer, Modasa;  
(xxviii) for the areas of district of Gir Somnath, the Assistant Regional Transport Officer, Veraval;  
(xxix) for the areas of district of Botad, the Assistant Regional Transport Officer, Botad;  
(xxx) for the areas of district of Chhotaudepur, the Assistant Regional Transport Officer, Chhotaudepur;  
(xxxi) for the areas of district of Mahisagar, the Assistant Regional Transport Officer, Lunavada;  
(xxxii) for the areas of district of Morbi, the Assistant Regional Transport Officer, Morbi;  
(xxxiii) for the areas of district of Devbhumi Dwarka, the Assistant Regional Transport Officer, Khambhaliya;  
(xxxiv) for the areas of district of Ahmedabad (Rural) as specified in the Government Resolution No.MVD/2011/1467/Kh, Dated.29.04.2017, the Assistant Regional Transport Officer, Bavala."
4. In the said rules, in rule 40, after entry (xxv), the following entries shall be added, namely  
(xxvi) for the areas of district of Dang, the Assistant Regional Transport Officer, Aahwa;  
(xxvii) for the areas of district of Arvalli, the Assistant Regional Transport Officer, Modasa;  
(xxiii) for the areas of district of Gir Somnath, the Assistant Regional Transport Officer, Veraval;  
(xxix) for the areas of district of Botad, the Assistant Regional Transport Officer, Botad;  
(xxx) for the areas of district of Chhotaudepur, the Assistant Regional Transport Officer, Chhotaudepur;  
(xxxi) for the areas of district of Mahisagar, the Assistant Regional Transport Officer, Lunavada;

(xxxii) for the areas of district of Morbi, the Assistant Regional Transport Officer, Morbi;

(xxxiii) for the areas of district of Devbhumi Dwarka, the Assistant Regional Transport Officer, Khambhaliya;

(xxxiv) for the areas of of district of Ahmedabad (Rural) as specified in the Government Resolution No.MVD/2011/1467/Kh, Dated.29.04.2017, the Assistant Regional Transport Officer, Bavala.".

5. In the said rules, in the Third Schedule under the heading "Registering Authority at", after the entry of "Vadodara-2", the following entries with their district code, under the heading of "District Code to be used by it", respectively, shall be added, namely:-

|                 |   |     |
|-----------------|---|-----|
| " Dangs         | - | 30  |
| Arvalli         | - | 31  |
| Veraval         | - | 32  |
| Botad           | - | 33  |
| Chhotaudepur    | - | 34  |
| Mahisagar       | - | 35  |
| Morbi           | - | 36  |
| Devbhumi Dwarka | - | 37  |
| Bavala          | - | 38" |

By order and in the name of the Governor of Gujarat,

**PRAKASH MAJMUDAR,**  
Deputy Secretary to Government.

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# The Gujarat Government Gazette

## EXTRAORDINARY

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### PART IV-A

Rules and Orders (Other than those published in Parts I, I-A, and I-L) made  
by the Government of Gujarat under the Central Acts

### LEGAL DEPARTMENT

#### Notification

Sachivalaya, Gandhinagar, 29<sup>th</sup> October, 2018.

#### The Commission of Inquiry Act, 1952.

**No.GK/52/2018/COI/I 02017/244/A : WHEREAS** the Government has under Government Notification, Legal Department No.GK/69/2017/COI/10 2017/244/A dated the 3<sup>rd</sup> October, 2017 appointed a Commission of Inquiry under section 3 of the commission of Inquiry act, 1952 (60 of 1952) to inquire into the Patidar Anamat Andolan Samiti and other allied organizations have been agitating for reservation in education as well as in Government services for the persons belonging to Patidar Community since the year 2015.

**AND WHEREAS** the Commission was required to complete the inquiry and submit its report on "as soon as possible but not later than six month from the date of this Notification" as provided in the aforesaid notification of 3<sup>rd</sup> October, 2017 and thereafter within the time limit extended till on or before the 31<sup>st</sup> October, 2018 as provided in the subsequent notifications;

**AND WHEREAS** the said Commission is not likely to complete the inquiry and submit its report into the said matter to the State Government till Now;

**AND WHEREAS** the Government of Gujarat is of the opinion that Commission should complete the inquiry and submit its report to the state Government on or before the 31<sup>st</sup> March, 2019;



**NOW, THEREFORE,** the exercise of the powers conferred by section 3 of the commission of inquiry act, 1952 (60 of 1952), the Government of Gujarat hereby amends the Government Notification, Legal Department No.GK/69/2017/COI/102017/244/A, dated 3<sup>rd</sup> October, 2017 as follow a namely:-

In the said notification, in paragraph 4, for words, figures and letters "on or before the 31<sup>st</sup> October, 2018." the words, figures and letters "on or before the 31<sup>st</sup> March, 2019" shall be substituted.

By order and in the name of the Governor of Gujarat,

**H. R. SHAH,**  
Deputy Secretary to Government.

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# The Gujarat Government Gazette

## EXTRAORDINARY

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### PART IV-A

Rules and Orders (Other than those published in Parts I, I-A, and I-L) made  
by the Government of Gujarat under the Central Acts

#### LEGAL DEPARTMENT

#### Notification

Sachivalaya, Gandhinagar, 12<sup>th</sup> October, 2018.

#### Protection of Children from Sexual Offences Act, 2012.

**NO.GK/40/2018/FTC/102018/2879/D :-** In exercise of the powers conferred by sub-section (1) of section 28 of the Protection of Children from Sexual Offences Act, 2012, (32 of 2012), the Government of Gujarat, in consultation with the Chief Justice of High Court of Gujarat, hereby designates the Court of Principal District Judge, Sabarkantha at Himmatnagar for speedy trial of rape cases arising from I.C.R.Nos.70/2018, of Gambhoi Police Station and the Court of Principal District Judge, Surat for speedy trial of rape cases arising from I.C.R.No.187/2018 and 188/2018 of Dindoli Police Station, in the State of Gujarat as "Special Fast Track Courts", respectively, to try the above cases under the afore said Act.

By order and in the name of the Governor of Gujarat,

**H. H. VARMA,**  
Deputy Secretary to Government.



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by the Government of Gujarat under the Central Acts

#### FOREST AND ENVIRONMENT DEPARTMENT

#### Notification

Sachivalaya, Gandhinagar, 26<sup>th</sup> October, 2018

#### Indian Forest Act, 1927 (XVI OF 1927)

**GVN/2018-(18)/JJM/15-06/18/GSF-13/F.--** In Exercise of the Powers conferred by the Section-20 of the Indian Forest Act, 1927(XVI OF 1927) in its Application to the State of Gujarat. The Government of Gujarat is pleased with reference of the Government Forest and Environment Department Notification No:-AVN-58/87/FLD/1287/1243/V-3 dated: 24.04.1987 Published in Gujarat Government Gazette Part-1 Dated: 09.07.1987 on page no. 1295 to 1301 to declare the land in Bhachau Taluka of Kutch District specified in the schedule here under appended, to be "RESERVED FOREST" with effect from the date of issue of this Notification.

#### SCHEDULE

Taluka : Bhachau

District : Kutch

| Sr.<br>No. | Name of<br>Village | Survey<br>No. | AREA   |        | Boundaries   |
|------------|--------------------|---------------|--------|--------|--|
|            |                    |               | A.G    | H.A    |  |
| 1          | 2                  | 3             | 4      | 5      | 6  |
| 1          | Shikarpur          | 790<br>Paiki  | 741.12 | 300.00 | North : S.No.61/2, 60, 59/2, 59/1, 66, 67/1, 68/1, 69, 70, 71/3, 71/2, 61/1, 72, 73, 74, Open land of T.S.No. 790 Paiki, S.No. 51/2, Open land of T.S.No. 790 Paiki, S.No. 75/1, 75/2, 76, 77, Open land of T.S.No. 790 Paiki, S.No.78, 79/1, 79/2, 80, Open land of T.S.No. 790 Paiki, Marag, Samkhiyali To Maliya Highway, S.No. 81/1, 81/2, 82, 83, 84. |

| Sr. No. | Name of Village | Survey No.    | AREA          |               | Boundaries  |
|---------|-----------------|---------------|---------------|---------------|---|
|         |                 |               | A.G           | H.A           |   |
| 1       | 2               | 3             | 4             | 5             | 6   |
| 1       | Shikarpur       | 790 Paiki     | 741.12        | 300.00        | <p>East : Salt Plot of T.S.No. 790 Paiki, S.No. 4, Salt Plot of T.S.No. 790 Paiki, S. No. 868/75, 868/65, 868/85, Marag.</p> <p>South : S.No.868/80, 868/52, 868/41, Salt Plots of T.S.No. 790 Paiki, S.No.868/59, Salt Plot of T.S.No. 790 Paiki, S.No. 868/6, 868/63, 868/55, 868/64, 868/71, 868/72, 868/74, 868/73, Salt Plot of T.S.No. 790 Paiki, S.No.868/14, Salt Plot of T.S.No.790 Paiki, S.No. 868/20, 868/38, 868/37, 868/19, Salt Plot of T.S.No. 790 Paiki and Sathni Land, Salt Plot of T.S.No. 790 Paiki.</p> <p>West : S.No. 868/48, 868/53, 868/32, 868/42, Marag, Boundary of Village Vandhiya, S.No. 64, 65, 63, 62/2, 62/1, Boundary of Village Vandhiya, Marag, Boundary of Village Vandhiya.</p> |
|         |                 | <b>Total:</b> | <b>741.12</b> | <b>300.00</b> |   |

By order and in the name of the Governor of Gujarat,

**MANISH C. SHAH,**

Under Secretary to Government.

વન અને પર્યાવરણ વિભાગ

જાહેરનામું

સચિવાલય, ગાંધીનગર, ૨૬મી ઓક્ટોબર, ૨૦૧૮.

ક્રમાંક: ગવન/૨૦૧૮-(૧૮)/જજમ/૧૫-૦૬/૧૮/જીએસએફ-૧૩/એફ ગુજરાત રાજ્યને લાગુ હોય તેટલે સુધી સને ૧૯૨૭ ના ભારતનાં જંગલો બાબતોનાં (સને ૧૯૨૭ ના ૧૬ માં) અધિનિયમની કલમ ૨૦ થી મળેલા અધિકારો અન્વયે ગુજરાત સરકાર ગુજરાત રાજ્ય પત્રના તા.૦૯.૦૭.૧૯૮૭ના પાના નં. ૧૨૯૫ થી ૧૩૦૧ પર પ્રસિદ્ધ કરેલી તા.૨૪.૦૪.૧૯૮૭ના વન અને પર્યાવરણ વિભાગની અધિસૂચના ક્રમાંક: અવન-૫૮/૮૭/જજમ/૧૨૮૭/૧૨૪૩/૫-૩ના અનુસંધાનમાં આ સાથે જોડેલી અનુસૂચિમાં નિર્દિષ્ટ કરેલ કચ્છ જિલ્લાના ભચાઉ તાલુકાની જમીનને આ અધિસૂચના પ્રસિદ્ધ થયાની તારીખથી “અનામત જંગલ” તરીકે જાહેર કરે છે.

અનુસૂચિ

તાલુકો: ભચાઉ

જિલ્લો: કચ્છ

| અ.નં. | ગામનું નામ | સર્વે નંબર | વિસ્તાર   |        | ચતુ:સીમા   |
|-------|------------|------------|-----------|--------|--|
|       |            |            | એકર-ગુંઠા | હે.-આર |  |
| ૧     | ૨          | ૩          | ૪         | ૫      | ૬  |
| ૧     | શિકારપુર   | ૭૯૦ પૈકી   | ૭૪૧.૧૨    | ૩૦૦.૦૦ | ઉત્તર : સ.નં.૬૧/૨, ૬૦, ૫૯/૨, ૫૯/૧, ૬૬, ૬૭/૧, ૬૮/૧, ૬૯, ૭૦, ૭૧/૩, ૭૧/૨, ૬૧/૧, ૭૨, ૭૩, ૭૪, ટ્રા.સ.નં. ૭૯૦ પૈકી ખુદી જમીન, સ.નં.૫૧/૨, ટ્રા.સ.નં.૭૯૦ પૈકી ખુદી જમીન, ૭૫/૧, |

| અ.નં. | ગામનું નામ | સર્વે નંબર | વિસ્તાર   |        | ચતુ:સીમા  |
|-------|------------|------------|-----------|--------|---|
|       |            |            | એકર-ગુંઠા | હે.-આર |   |
| ૧     | ૨          | ૩          | ૪         | ૫      | ૬   |
| ૧     | શિકારપુર   | ૭૯૦ પૈકી   | ૭૪૧.૧૨    | ૩૦૦.૦૦ | <p>૭૫/૨, ૭૬, ૭૭, ટ્રા.સ.નં. ૭૯૦ પૈકી ખુદી જમીન, ૭૮, ૭૯/૧, ૭૯/૨, ૮૦, ટ્રા.સ.નં. ૭૯૦ પૈકી ખુદી જમીન, મારગ, સામખીયાલી થી માળિયા તરફ રોડ, ૮૧/૧, ૮૧/૨, ૮૨, ૮૩, ૮૪.</p> <p>પૂર્વ : ટ્રા.સ.નં. ૭૯૦ પૈકી મીઠાના પ્લોટ, સ.નં.૪, સ.નં. ૭૯૦ પૈકી મીઠાના પ્લોટ, સ.નં.૮૬૮/૭૫, ૮૬૮/૬૫, ૮૬૮/૮૫, મારગ.</p> <p>દક્ષિણ : સ.નં.૮૬૮/૮૦, ૮૬૮/૫૨, ૮૬૮/૪૧, ટ્રા.સ.નં. ૭૯૦ પૈકી મીઠાના પ્લોટ, સ.નં. ૮૬૮/૬, ૮૬૮/૬૩, ૮૬૮/૫૫, ૮૬૮/૬૪, ૮૬૮/૭૧, ૮૬૮/૭૨, ૮૬૮/૭૪, ૮૬૮/૭૩, ટ્રા.સ.નં. ૭૯૦ પૈકી મીઠાના પ્લોટ, સ.નં. ૮૬૮/૧૪, ટ્રા.સ.નં. ૭૯૦ પૈકી મીઠાના પ્લોટ, સ.નં. ૮૬૮/૨૦, ૮૬૮/૩૮, ૮૬૮/૩૭, ૮૬૮/૧૯, ટ્રા.સ.નં. ૭૯૦ પૈકી મીઠાના પ્લોટ તથા સાથણી, ટ્રા.સ.નં. ૭૯૦ પૈકી મીઠાના પ્લોટ.</p> <p>પ્રશ્ચિમ: સ.નં. ૮૬૮/૪૮, ૮૬૮/૫૩, ૮૬૮/૩૨, ૮૬૮/૪૨, મોજે વાંઢીયાનો સીમાડો, સ.નં.૬૪, ૬૫, ૬૩, ૬૨/૨, ૬૨/૧, મોજે વાંઢીયાનો સીમાડો, મારગ, મોજે વાંઢીયાનો સીમાડો.</p> |
|       |            | કુલ :      | ૭૪૧.૧૨    | ૩૦૦.૦૦ |   |

ગુજરાતના રાજ્યપાલશ્રીના હુકમથી અને તેમના નામે,

મનીષ સી. શાહ,  
સરકારના ઉપસચિવ.

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સરકારી મધ્યસ્થ મુદ્રણાલય, ગાંધીનગર.



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### PART IV-A

Rules and Orders (Other than those published in Parts I, I-A, and I-L) made  
by the Government of Gujarat under the Central Acts

#### LEGAL DEPARTMENT

#### Notification

Sachivalaya, Gandhinagar, 16<sup>th</sup> October, 2018.

#### CODE OF CRIMINAL PROCEDURE, 1973.

**NO GK/44/2018/CCA/102014/1161/D (PART- 1) :-** In exercise of the powers conferred by section 7 read with section 9 of the Code of Criminal Procedure, 1973 (2 of 1974), and in supersession of all the notifications issued in this behalf so far as they relate to the Sessions Division of the Court of Sessions Ahmedabad(Rural) and Bhavnagar, the Government of Gujarat, after consultation with the High Court of Gujarat, hereby specifies that consequent upon the bifurcation of Ahmedabad District and Bhavnagar District, into the Ahmedabad District, Bhavnagar District and Botad District vide Government Notification, Revenue Department No.GHM/2013/71/M/PFR/102013/139/L.I. dated the 13<sup>th</sup> August, 2013, the Sessions Division of the Court of Sessions, Ahmedabad and Bhavnagar shall consist of the Districts Ahmedabad and Bhavnagar with effect on and from the 21<sup>st</sup> October, 2018.

By order and in the name of the Governor of Gujarat,

**H. H. VARMA,**

Deputy Secretary to Government.



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#### LEGAL DEPARTMENT

#### Notification

Sachivalaya, Gandhinagar, 16<sup>th</sup> October, 2018.

#### CODE OF CRIMINAL PROCEDURE, 1973.

No. GK/45/2018/CCA/102014/1161/D, (PART -1) :- In exercise of the powers conferred by section 7 read with section 9 of the Code of Criminal Procedure, 1973 (2 of 1974), and in supersession of all the notifications issued in this behalf so far as they relate to the Sessions Division of the Court of Session, Ahmedabad District and Bhavanagar District, the Government of Gujarat, after consultation with the High Court of Gujarat, hereby establishes with effect on and from the 21<sup>st</sup> October, 2018, a Court of Session for the District of Botad and specifies that the Sessions division of the Court of Session Botad shall consist of the district of Botad as constituted under Government, Notification, Revenue Department No. GHM/2013/71/M/PFR/102013/139/L-1, dated the 13<sup>th</sup> August, 2013.

By order and in the name of the Governor of Gujarat,

**H. H. VARMA,**  
Deputy Secretary to Government.



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#### FOOD, CIVIL SUPPLIES AND CONSUMER AFFAIRS DEPARTMENT

##### Order

Sachivalaya, Gandhinagar, 30<sup>th</sup> October, 2018.

#### Essential Commodities Act, 1955.

**No:GTH-2018-29-PTL-102015-9-B:** In exercise of the powers conferred by section 3 of the Essential Commodities Act, 1955 (10 of 1955), read with the Order of Government of India, Ministry of Petroleum and Natural Gas No. G.S.R. 729(E), dated the 19<sup>th</sup> December, 2005, the Government of Gujarat hereby makes the following order further to amend the Gujarat Essential Articles ( Licensing, Control and Stock-Declaration) Order, 1981, namely :-

- (i) This order may be called the Gujarat Essential Articles (Licensing, Control and Stock-Declaration) (Amendment) Order, 2018.  
(ii) It shall come into force at once.
- In the Gujarat Essential Articles (Licensing, Control and Stock Declaration) Order, 1981 in Schedule-I, in Part-II, under the heading Other than Food stuff, under item “(2) Petroleum products namely:” entry (c) high speed diesel oil, and entry (d) \*\*\*\* Petrol, shall be deleted.

By Order and in the name of the Governor of Gujarat,

**ACHAL SONI**

Under Secretary to Government.

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by the Government of Gujarat under the Central Acts

#### FOOD, CIVIL SUPPLIES AND CONSUMER AFFAIRS DEPARTMENT

#### Notification

Sachivalaya, Gandhinagar, 20<sup>th</sup> October, 2018

#### Consumer Protection Act, 1986.

**No. GTH/2018/ 27/CPA/102018/525814 /D:**— In exercise of the powers conferred by clause (A) of section 9 read with sub- section (1) (a), 1 (A) and 2 of section-10 of the Consumer Protection Act, 1986 as amended in 1993 and 2002, Government of Gujarat hereby appoints following retired Judges as president of the State Consumer Disputes Redressal forum

| Sr. No. | Name of Judicial Officer | President of district forum | Headquarters |
|---------|--------------------------|-----------------------------|--------------|
| 1       | 2                        | 3                           | 4            |
| 1       | Shri Y. D. Trivedi       | Junagadh                    | Junagadh     |
| 2       | Shri B. B. Pathak        | Amreli                      | Amreli       |

The appointment of retired judicial Officials as Presiding Members for a period of 5 years or the age of 65 years, whichever is earlier.

The terms and conditions shall be applicable as decided in the Gujarat Consumer Protection Rules, 1988 amended by time to time and Notification No. GTH/2015/ 2/ CPA/102013/489863/D dated 15-1-2015.

By order and in the name of the Governor of Gujarat,

**P. N. MEHTA,**

Section Officer,

Food, Civil Supplies & Consumer Affairs Department.  
Government of Gujarat.

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વન અને પર્યાવરણ વિભાગ

સુધારા જાહેરનામું

સચિવાલય, ગાંધીનગર, ૨૬મી ઓક્ટોબર, ૨૦૧૮

વન્ય પ્રાણી (સંરક્ષણ) અધિનિયમ-૧૯૭૨

સંદર્ભ : (૧) વન અને પર્યાવરણ વિભાગના જાહેરનામા ક્રમાંક: ગવન-૨૦૧૭-૪૪-૩બલ્યુએલપી-૧૦૧૧-૪૮૨-૩બલ્યુ, તા.૧૬-૧૦-૨૦૧૭

(૨) અગ્ર મુખ્ય વન સંરક્ષકશ્રી (વન્ય પ્રાણી), ગુજરાત રાજ્ય, ગાંધીનગરનો તા.૦૪-૧૦-૨૦૧૮ નો પત્ર ક્રમાંક: વપસ/૨૬/અ/૬૮૩/સને ૨૦૧૮-૧૮.

ક્રમાંક: ગવન-૨૦૧૮-૧૮-૩બલ્યુએલપી-૧૦૧૧-૪૮૨-૩બલ્યુ.— રાજ્યના તમામ ૩૩ જિલ્લાઓના ૨૫૦ તાલુકા માટે વન્ય પ્રાણી (સંરક્ષણ) ધારા, ૧૯૭૨ની કલમ ૪(૧)(બી) હેઠળ રાજ્ય સરકારને મળેલ સત્તાની રૂએ સંદર્ભ-(૧) ના જાહેરનામાથી તેની સાથે સામેલ અનુસૂચિમાં દર્શાવેલ વન અધિકારીશ્રીને જે તે તાલુકા તથા જિલ્લા માટે ‘તાલુકા વન્યપ્રાણી સંરક્ષક’ (તાલુકા વાઈલ્ડ લાઈફ વોર્ડન) અને ‘જિલ્લા વન્યપ્રાણી સંરક્ષક’ (ડિસ્ટ્રીક્ટ વાઈલ્ડ લાઈફ વોર્ડન) તરીકે નિમણુંક કરવામાં આવેલ. ઉક્ત સંદર્ભ-(૧) થી પ્રસિદ્ધ કરેલ જાહેરનામામાં આ સાથે સામેલ અનુસૂચિ મુજબ સુધારો કરવામાં આવેલ છે.

ગુજરાતના રાજ્યપાલશ્રીના હુકમથી અને તેમના નામે,

બી. જી. વાઘેલા,

સરકારના ઉપ સચિવ.

વન અને પર્યાવરણ વિભાગ, સચિવાલય, ગાંધીનગરના તા.૨૬-૧૦-૨૦૧૮ના સુધારા જાહેરનામા  
ક્રમાંક: ગવન-૨૦૧૮-૧૮-ડબલ્યુએલપી-૧૦૧૧-૪૮૨-ડબલ્યુ ની અનુસૂચિ

| ક્રમાંક | જિલ્લાનું નામ | તાલુકાનું નામ | તાલુકા કક્ષાએ તાલુકા વન્યપ્રાણી સંરક્ષક (તાલુકા વાઈલ્ડ લાઈફ વોર્ડન)   | કોલમ-૩ માં દર્શાવેલ તાલુકા માટે જિલ્લા વન્યપ્રાણી સંરક્ષક (ડિસ્ટ્રીક્ટ વાઈલ્ડ લાઈફ વોર્ડન) |
|---------|---------------|---------------|---|--|
| ૧       | ૨             | ૩             | ૪   | ૫  |
| ૧૮      | અમરેલી        | જાફરાબાદ      | પરિક્ષેત્ર વન અધિકારી (સા.વ.), રાજુલા   | નાયબ વન સંરક્ષકશ્રી, સામાજિક વનીકરણ વિભાગ, અમરેલી  |
| ૬૪      | ભાવનગર        | ભાવનગર        | પરિક્ષેત્ર વન અધિકારી, મો.સ્કો. રેન્જ, ભાવનગર<br>(કાર્ય વિસ્તાર: ગણેશગઢ, નર્મદા, સનેસ, ખેતાખાટલી, કાળાતળાવ, સવાઈકોટ, સવાઈનગર, દેવળીયા, પાળીયાદ, નવા માઢીયા, જૂના માઢીયા, કમળેજ, કરદેજ, નારી, વરતેજ અને અધેવાડા) | મદદનીશ વન સંરક્ષકશ્રી, કાળીયાર રાષ્ટ્રીય ઉદ્યાન, વેળાવદર                                   |
|         | ”             | ”             | પરિક્ષેત્ર વન અધિકારી, વેળાવદર<br>(કાર્ય વિસ્તાર: મીઠાપુર, કાનાતળાવ, અધેલાઈ, વેળાવદર, રાજગઢ, ભડભીડ, જસવંતપરા, કોટડા અને ગુંદાળા)  | મદદનીશ વન સંરક્ષકશ્રી, કાળીયાર રાષ્ટ્રીય ઉદ્યાન, વેળાવદર                                   |
|         | ”             | ”             | પરિક્ષેત્ર વન અધિકારી, ભાવનગર ક્ષેત્રીય, ભાવનગર<br>(કાર્ય વિસ્તાર: ભાવનગર તાલુકાનો બાકી રહેતો તમામ વિસ્તાર)   | નાયબ વન સંરક્ષકશ્રી, ભાવનગર વન વિભાગ, ભાવનગર   |
| ૭૮      | દાહોદ         | બારીયા        | પરિક્ષેત્ર વન અધિકારી, બારીયા   | નાયબ વન સંરક્ષકશ્રી, બારીયા વન વિભાગ   |
| ૧૪૩     | મહીસાગર       | વિરપુર        | પરિક્ષેત્ર વન અધિકારી, વિરપુર   | નાયબ વન સંરક્ષકશ્રી, સામાજિક વનીકરણ વિભાગ, ગોધરા   |
| ૧૪૪     | ,,            | બાલાસિનોર     | પરિક્ષેત્ર વન અધિકારી, બાલાસિનોર  | નાયબ વન સંરક્ષકશ્રી, સામાજિક વનીકરણ વિભાગ, ગોધરા   |
| ૧૬૬     | નર્મદા        | ગરૂડેશ્વર     | પરિક્ષેત્ર વન અધિકારી, ગોરા   | નાયબ વન સંરક્ષકશ્રી, નર્મદા વન વિભાગ   |
| ૧૮૮     | પોરબંદર       | પોરબંદર       | પરિક્ષેત્ર વન અધિકારી, રાણાવાવ  | નાયબ વન સંરક્ષકશ્રી, પોરબંદર વન વિભાગ  |
| ૨૦૬     | સાબરકાંઠા     | હિંમતનગર      | પરિક્ષેત્ર વન અધિકારી, રાયગઢ  | નાયબ વન સંરક્ષકશ્રી, સાબરકાંઠા વન વિભાગ  |

બી. જી. વાઘેલા,  
સરકારના ઉપ સચિવ.  
વન અને પર્યાવરણ વિભાગ.



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#### FOREST AND ENVIRONMENT DEPARTMENT

#### Notification

Sachivalaya, Gandhinagar, 29<sup>th</sup> October, 2018

#### Indian Forest Act, 1927 (XVI OF 1927)

**GVN/2018-(20)/JJM/15-09/18/GSF-14/F.**— In Exercise of the Powers conferred by the Section-20 of the Indian Forest Act, 1927(XVI OF 1927) in its Application to the State of Gujarat. The Government of Gujarat is pleased with reference of the Government Forest and Environment Department Notification No:-GVN-2004/(20)/JJM-1004-2020-K dated: 15.12.2004 Published in Gujarat Government Gazette Part-1 dated: 28/12/2004 on page no. 139-2 to 139-4 to declare the land in Abdasa Taluka of Kutch District specified in the schedule here under appended, to be "RESERVED FOREST" with effect from the date of issue of this Notification.

#### SCHEDULE

Taluka : Abdasa

District: Kutch

| Sr. No. | Name of Village | Survey No.          | AREA   |        | Boundaries   |
|---------|-----------------|---------------------|--------|--------|--|
|         |                 |                     | A.G    | H.A    |  |
| 1       | 2               | 3                   | 4      | 5      | 6  |
| 1       | Gadhvada Part-1 | 184 to 194, 198, 22 | 504.22 | 204.19 | North : S.No. 199, 19/2, 19/1, 20, 21. Boundary of village Bitiyari and Rav.<br>East : Boundary of village Rav, Open land of T.S.No. 179 paiki, S.No. 29, Open land of T.S. No.179 paiki, S.No. 28. Open land of T.S. No.179 paiki.<br>South : S. No. 27, 26, 180, 24, 23/2, 23/1, Marag, S. No. 25(Pond), Marag, S. No. 122, 123, 194 part.<br>West: S. No. 194 part, 197, Marag. |

| Sr. No. | Name of Village | Survey No.    | AREA          |               | Boundaries   |
|---------|-----------------|---------------|---------------|---------------|--|
|         |                 |               | A.G           | H.A           |  |
| 1       | 2               | 3             | 4             | 5             | 6  |
| 2       | Gadhvada Part-2 | 163, 164, 206 | 136.28        | 55.13         | North : S.No. 207 part, 204. 205.<br>East : S.No. 196, 195.<br>South : S.No. 171, 170, Marag, 165, 328,<br>West : S.No. 2. 8/1.8/2. 9/2. |
|         |                 | <b>Total:</b> | <b>641.10</b> | <b>259.32</b> |  |

By order and in the name of the Governor of Gujarat,

**MANISH C. SHAH,**  
Under Secretary to Government.

વન અને પર્યાવરણ વિભાગ

જાહેરનામું

સચિવાલય, ગાંધીનગર, ૨૮મી ઓક્ટોબર, ૨૦૧૮

**ક્રમાંક: ગવન/૨૦૧૮-(૨૦)/જજમ/૧૫-૦૮/૧૮/જીએસએફ-૧૪/એફ.-** ગુજરાત રાજ્યને લાગુ હોય તેટલે સુધી સને ૧૯૨૭ ના ભારતનાં જંગલો બાબતોનાં (સને ૧૯૨૭ ના ૧૬ માં) અધિનિયમની કલમ ૨૦ થી મળેલા અધિકારો અન્વયે ગુજરાત સરકાર ગુજરાત રાજ્યપત્ર પર પ્રસિદ્ધ કરેલી તા.૨૮-૧૨-૨૦૦૪ ના વન અને પર્યાવરણ વિભાગની અધિસૂચના ક્રમાંક: ગવન-૨૦૦૪/(૨૦)/જજમ/ ૧૦૦૪/૨૦૨૦-ક ના અનુસંધાનમાં આ સાથે જોડેલી અનુસૂચિમાં નિર્દિષ્ટ કરેલ કચ્છ જિલ્લાના અબડાસા તાલુકાની જમીનને આ અધિસૂચના પ્રસિદ્ધ થયાની તારીખથી “અનામત જંગલ” તરીકે જાહેર કરે છે.

અનુસૂચિ

તાલુકો : અબડાસા

જિલ્લો : કચ્છ

| અ. નં. | ગામનું નામ   | સર્વે નંબર          | વિસ્તાર       |               | ચતુ:સીમા   |
|--------|--------------|---------------------|---------------|---------------|--|
|        |              |                     | એકર-ગુંઠા     | હે.આર.        |  |
| ૧      | ૨            | ૩                   | ૪             | ૫             | ૬  |
| ૧      | ગઢવાડા ભાગ-૧ | ૧૮૪ થી ૧૮૪, ૧૮૮, ૨૨ | ૫૦૪.૨૨        | ૨૦૪.૧૮        | ઉત્તર : સ.નં. ૧૮૮, ૧૮/૨, ૧૮/૧, ૨૦, ૨૧, મોજે બીટીયારી અને રવનો સીમાડો.<br>પૂર્વ : મોજે.રવનો સીમાડો, ટ્રા.સ.નં. ૧૭૮ પૈકી ખુલ્લી જમીન ૨૮, ટ્રા.સ.નં. ૧૭૮ પૈકી ખુલ્લી જમીન ૨૮, ટ્રા.સ.નં. ૧૭૮ પૈકી ખુલ્લી જમીન.<br>દક્ષિણ : સ.નં. ૨૭, ૨૬, ૧૮૦, ૨૪, ૨૩/૨, ૨૩/૧, મારગ, સ.નં. ૨૫ (તલાવડી), મારગ, સ.નં. ૧૨૨, ૧૨૩, ૧૮૪ પૈકી.<br>પશ્ચિમ : સ.નં. ૧૮૪ પૈકી, ૧૮૭. મારગ. |
| ૨      | ગઢવાડા ભાગ-૨ | ૧૬૩, ૧૬૪, ૨૦૬       | ૧૩૬.૨૮        | ૫૫.૧૩         | ઉત્તર : સ.નં. ૨૦૭ પૈકી, ૨૦૪, ૨૦૫.<br>પૂર્વ : સ.નં. ૧૮૬, ૧૮૫.<br>દક્ષિણ : સ.નં. ૧૭૧, ૧૭૦, મારગ, ૧૬૫, ૩૨૮.<br>પશ્ચિમ : સ.નં. ૨, ૮/૧, ૮/૨, ૮/૨.   |
|        |              | <b>કુલ:</b>         | <b>૬૪૧.૧૦</b> | <b>૨૫૯.૩૨</b> |  |

ગુજરાતના રાજ્યપાલશ્રીના હુકમથી અને તેમના નામે,

**મનીષ સી. શાહ,**  
સરકારના ઉપસચિવ.

સરકારી મધ્યસ્થ મુદ્રણાલય, ગાંધીનગર.



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# The Gujarat Government Gazette

## EXTRAORDINARY

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### PART IV-A

Rule and Orders (Other than those published in Parts I, I-A, and I-L) made  
by the Government of Gujarat under the Central Acts

### HOME DEPARTMENT

### NOTIFICATION

Sachivalaya, Gandhinagar, 22<sup>nd</sup> October, 2018.

### RIGHT TO INFORMATION ACT, 2005

**NO. GG/2018/80/LRV/102018/792/H:** In exercise of the powers conferred by sub-section (4) of the Section 24 of the Right to Information Act, 2005 (22 of 2005), the State Government do hereby specify that nothing contained in the said Act shall apply to the Anti-Corruption Bureau of Gujarat State and its organisations.

By order and in the name of the Governor of Gujarat.

**G.P.TADA,**

Under Secretary to Government.



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## EXTRAORDINARY

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#### PART IV-A

Rule and Orders (Other than those published in Parts I, I-A, and I-L) made by the Government of Gujarat under the Central Acts

#### FOOD, CIVIL SUPPLIES AND CONSUMER AFFAIRS DEPARTMENT

#### Notification

Sachivalaya, Gandhinagar, 2<sup>nd</sup> November, 2018

#### CONSUMER PROTECTION ACT, 1986.

**No. GTH/2018/30/CPA/102018/563860 /D:**— In exercise of the powers conferred by clause (a) of section 9 read with sub- section (1) (a),1 (A) and (2) of section-10 of the Consumer Protection Act, 1986 as amended in 1993 and 2002, Government of Gujarat hereby appoints following members to District Consumer Disputes Redressal Forum.

| Sr. No. | Name of Member   | Place of Appointment and Head Quarter (District Consumer Redressal Forum) | Tenure  |
|---------|------------------|---|---|
| (1)     | (2)              | (3)   | (4)   |
| 1       | Smt. J.S.Dhebar  | CDRF, Vadodara(main)  | for a period of 5 years or up to the age of 65 years whichever is earlier |
| 2       | Shri S.N.Mehta   | CDRF, Amreli  |   |
| 3       | Smt. L.B.Pilai   | CDRF, Kachchh   |   |
| 4       | Smt. K.P.Sachdev | CDRF, Rajkot (main)   |   |
| 5       | Dr. B.K.Trivedi  | CDRF, Banaskantha   |   |

#### Terms and conditions for the above appointment is as below:-

- (1) The terms and conditions shall be applicable as decided in the G.R. No: CPA/ 1098/2860/D, dated 30/11/2004, G.R. NO: CPA/ 1098 /2860/D, dated 15/2/ 2006 and 7/8/ 2006 and Notification No: GTH/2014/38/CPA/102013 /480323/D dated 1/12/2014 issued by the State Government.
- (2) In case the candidate recommended for appointment is an advocate, then he/she invariably deposit the 'Sanad' with the Bar Council and the same will lie deposited with the Bar Council so long as the candidate holds the post of the Member of the District Forum.
- (3) He/She should perform his/her duties as Member of the Forum efficiently, honestly and with full ability and integrity.
- (4) His/her appointments as non-judicial Member of the District Forum is on full time basis.

- (5) If his/her performance is poor and not satisfactory, he/she will be removed.
- (6) Involvement of the appointed candidate in any other activity than functioning as non judicial member of the District Forum will amount to cancellation of his/her appointment.

By order and in the name of the Governor of Gujarat,

**P. N. MEHTA,**

Section Officer,

Food, Civil Supplies & Consumer Affairs Department.

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## PART IV-A

**Rules and Orders (Other than those published in Parts I, I-A, and I-L) made  
by the Government of Gujarat under the Central Acts**

### LEGAL DEPARTMENT

#### Notification

Sachivalaya, Gandhinagar, 1<sup>st</sup> November, 2018.

#### **Scheduled Castes and the Scheduled Tribes (Prevention of Atrocities) Act, 1989.**

**No.GK/53/2018/SCT/102016/2599/D :-** In exercise of the powers conferred by the first proviso to sub-section (1) of section 14 of the Scheduled Castes and the Scheduled Tribes (Prevention of Atrocities) Act 1989, (33 of 1989) the Government of Gujarat with the concurrence of the Chief Justice of High Court of Gujarat hereby amends the Government Notification, Legal Department No.GK/116/2017/SCT/102016/2596/D, Dated the 27<sup>th</sup> October, 2017, as follows, namely :-

In the said notification, in the schedule, after the entry at Sr.No.3, the following entries shall be added, namely :-

#### SCHEDULE

| Sr.No. | Name of the Districts | Name of Sub-Division |
|--------|-----------------------|----------------------|
| (1)    | (2)                   | (3)                  |
| "4.    | Anand                 | Petlad               |
| 5.     | Junagadh              | Vanthali             |
| 6.     | Banaskantha           | Tharad               |
| 7.     | Gir-Somnath           | Kodinar              |
| 8.     | Amreli                | Dhari                |
| 9.     | Patan                 | Radhanpur."          |

By order and in the name of the Governor of Gujarat,

**H. H. VARMA,**

Deputy Secretary to Government.



સત્યમેવ જયતે

# The Gujarat Government Gazette

## EXTRAORDINARY PUBLISHED BY AUTHORITY

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### PART IV-A

Rule and Orders (Other than those published in Parts I, I-A, and I-L) made  
by the Government of Gujarat under the Central Acts

#### FOREST AND ENVIRONMENT DEPARTMENT

#### Notification

Sachivalaya, Gandhinagar, 17<sup>th</sup> November, 2018

#### Indian Forest Act, 1927 (XVI OF 1927)

No. GVN/2018-(21 )/JJM/16-1/2018/GSF-10/F.- In exercise of the powers conferred by section (4) and (17) of the Indian Forest Act, 1927 ( XVI OF 1927 ), in its application to the state of Gujarat, (here in after referred to as "The said act".) the Government of Gujarat here by :

- (a) Declares that it has been decided to constitute the land in the village of Sanala in Vinchhiya Taluka of Rajkot District specified in the schedule appended here to "under section-4".  
(b) Forest settlement officer. Junagadh who is referred as "Forest Settlement Officer" hereafter to be the officer for the purpose of clause (c) of Sub-Section(l) of section-4 and.
- Appoints the Collector, Rajkot District at Rajkot to hear the appeals from any orders passed by the said Forest settlement officer under section 11,12,15 and 16 of the said Act.

#### SCHEDULE

Taluka : Vinchhiya

District : Rajkot

| Sr. No. | Name of the Village | Survey No.              | Area in Hectors | Boundaries   |
|---------|---------------------|-------------------------|-----------------|--|
| 1       | 2                   | 3                       | 4               | 6  |
| 1       | Sanala              | 121/Paiki 1,<br>Paiki 2 | 16.5541         | North : S.No. 20, 121, pt., 26, 25, 24<br>East : S. No. 121/22<br>South : Road and Village Boundary of Viravadi & S. No. 21<br>West: Viravadi Road and Village Boundary of Bhadli. |
|         |                     | <b>Total:</b>           | <b>16.5541</b>  |  |

By order and in the name of the Governor of Gujarat,

**MANISH C. SHAH,**  
Under Secretary to Government.

## વન અને પર્યાવરણ વિભાગ

## જાહેરનામું

સચિવાલય, ગાંધીનગર, ૧૭મી નવેમ્બર, ૨૦૧૮

સને ૧૯૨૭ ના ભારતના જંગલો બાબત (સને ૧૯૨૭ના ૧૬મા) અધિનિયમ અન્વયે ક્રમાંક : ગવન/૨૦૧૮-(૨૧)/જજમ/૧૬-૧/૨૦૧૮/જાએસએફ-૧૦/એફ, ગુજરાત રાજ્યને લાગુ હોય તેટલે સુધી સને ૧૯૨૭ ના ભારતના જંગલો બાબતના (સને ૧૯૨૭ ના ૧૬ માં) અધિનિયમ જેનો આમાં હવે પછી “ઉક્ત અધિનિયમ” તરીકે ઉલ્લેખ કર્યો છે તેની કલમો (૪) અને (૧૭)ની રૂએ મળેલા અધિકારો અન્વયે ગુજરાત સરકાર, આથી

(૧) (અ) જાહેર કરે છે કે, આ સાથે જોડેલી અનુસૂચિમાં નિર્દિષ્ટ કરેલ રાજકોટ જિલ્લાના, વિંછીયા તાલુકાના મોજે. સનાળા ગામની જમીનને “કલમ-૪” હેઠળ જાહેર કરવાનું નક્કી કરવામાં આવ્યું છે, અને

(બ) જંગલ નિયામક અધિકારી (ફોરેસ્ટ સેટલમેન્ટ ઓફિસર) જૂનાગઢને જેનો કલમ (૪)ની પેટા કલમ-(૧)ની પેટા કલમ-(ક)ના હેતુઓ સારું અધિકારી તરીકે નિયુક્ત કરવામાં આવે છે.

(૨) ઉક્ત અધિનિયમની કલમો-૧૧, ૧૨, ૧૫ અને ૧૬ અન્વયે ઉક્ત ફોરેસ્ટ સેટલમેન્ટ ઓફિસરે પસાર કરેલ કોઈપણ આદેશો પર અપીલ સાંભળવા રાજકોટ જિલ્લાના કલેક્ટરશ્રીને નિયુક્ત કરવામાં આવે છે.

## અનુસૂચિ

તાલુકો : વિંછીયા

જિલ્લો : રાજકોટ

| અ. નં. | ગામનું નામ | સર્વે નંબર            | વિસ્તાર હે. | ચતુ:સીમા  |
|--------|------------|-----------------------|-------------|---|
| ૧      | ૨          | ૩                     | ૪           | ૬   |
| ૧      | સનાળા      | ૧૨૧/પૈકી ૧,<br>પૈકી ૨ | ૧૬.૫૫૪૧     | ઉત્તર : સ.નં. ૨૦, ૧૨૧/પૈકી, ૨૬, ૨૫, ૨૪.<br>પૂર્વ : સ.નં. ૧૨૧/૨૨<br>દક્ષિણ : રસ્તો અને વીરાવાડી ગામનો સીમાડો તથા સ.નં. ૨૧<br>પશ્ચિમ : વીરાવાડી રોડ અને ભડલી ગામનો સીમાડો |
|        |            | કુલ:                  | ૧૬.૫૫૪૧     |   |

ગુજરાતના રાજ્યપાલશ્રીના હુકમથી અને તેમના નામે,

મનીષ સી. શાહ,  
સરકારના ઉપસચિવ.

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सत्यमेव जयते

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## PART IV-A

**Rules and Orders (Other than those published in Parts I, I-A, and I-L) made  
by the Government of Gujarat under the Central Acts**

### HOME DEPARTMENT

#### Notification

Sachivalaya, Gandhinagar, 26<sup>th</sup> November, 2018

#### The Representation of People Act, 1951

**No. GG/90/SB-I/ELC/102018/89:—** In pursuance of the provisions of Section 28-A of the Representation of People Act, 1951 and in view of the directions contained in the Election Commission of India's letter No.434/I/ESO26/94/MCS, dated 24th October, 1994 on the said subject, the Government of Gujarat hereby declares the following Police Officers as the designated officers for the purpose of Section 28-A of the Representation of People Act, 1951 for conduct of the by-election to the below mentioned constituency of the Gujarat State Legislative Assembly:-

| Sr.No. | Number and Name of Assembly Constituency | The District in which the Constituency is comprised |
|--------|--|---|
| 1.     | 72 - Jasdan                              | Rajkot District                                     |

The said by-election has been announced by the Election Commission of India, New Delhi and necessary notification under section 150 of the R.P. Act, 1951 will be issued by the Commission on 26/11/2018(Monday).

1. The Director General of Police / Additional Director General of Police / Inspector General of Police ; and
2. In the case of a by-election, the Additional DG/DIG/Commissioner of Police under whose jurisdiction the Constituency falls and all Police Officers below them in the districts/constituencies concerned as designated officers for the purpose of section 28-A of R.P. Act-1951.
3. These orders shall be effective from 26<sup>th</sup> November, 2018 (Monday) and shall remain in force till the date of completion of the process of the said by-election.

By order and in the name of the Governor of Gujarat,

**PANKAJ DAVE,**  
Under Secretary to Government.



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## **PART IV-A**

**Rules and Orders (Other than those published in Parts I, I-A, and I-L) made  
by the Government of Gujarat under the Central Acts**

### **INDUSTRIES AND MINES DEPARTMENT**

#### **NOTIFICATION**

Sachivalaya, Gandhinagar, 19<sup>th</sup> November, 2018.

#### **CONSTITUTION OF INDIA.**

**NO.GU/2018/26/BRT/102008/697/D-2 :-** In exercise of the powers conferred by the proviso to article 309 of the Constitution of India, the Governor of Gujarat hereby makes the following rules further to amend the Deputy Director (Technical), Class I, Recruitment Rules, 2014, namely:-

2. These rules may be called the Deputy Director (Technical), Class I, Recruitment (Amendment) Rules, 2018.
3. In the Deputy Director (Technical), Class I, Recruitment Rules, 2014, in rule 5, in clause(b) in sub clause (ii), after the words "obtained from" the words "Technical Examinations Board or" shall be inserted.

By order and in the name of the Governor of Gujarat,

**M. M. DABHI,**  
Deputy Secretary to Government.

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# The Gujarat Government Gazette

## EXTRAORDINARY

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### PART IV-A

Rules and Orders (Other than those published in Parts I, I-A, and I-L) made  
by the Government of Gujarat under the Central Acts

#### HOME DEPARTMENT

##### Notification

Sachivalaya, Gandhinagar, 3<sup>rd</sup> November, 2018

#### Right to Information Act, 2005.

**No.GG/2018/83/RTI/102017/249/C :** In exercise of the powers conferred by sub-section (4) of the Section 24 of the Right to Information Act, 2005 (22 of 2005), the State Government do hereby specify that nothing contained in the said Act shall apply to the Gujarat Industrial security Force Society and its organizations.

By order and in the name of the Governor of Gujarat,

**D. A. SHAH,**

Under Secretary to Government.

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#### ENERGY AND PETROCHEMICALS DEPARTMENT

##### Notification

Sachivalaya, Gandhinagar, 22<sup>nd</sup> November, 2018

**Central Electricity Authority (Measures relating to Safety and Electric Supply Regulation, 2010)**

**NO.GU/98/CEI/11/2012/4140/K:-** In exercise of the powers conferred by regulation 32 of the Central Electricity Authority (Measures relating to Safety and Electric Supply) Regulations, 2010 and in supersession of the earlier Notifications in this behalf the Government of Gujarat hereby notifies that, no generating unit having installed capacity of above 10 KW (or 12.5 KVA) producing electricity shall be commissioned unless it is duly inspected by the Electrical Inspector:

Provided that the generating unit installed under Suryshakti Kisan Yojana, having installed capacity up to 20 KW (AC) shall be exempted from the inspection by the Electrical Inspector.

By order and in the name of the Governor of Gujarat,

**K. L. BACHANI,**

Officer on Special Duty (Power).

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#### PART IV-A

**Rules and Orders (Other than those published in Parts I, I-A, and I-L) made by the Government of Gujarat under the Central Acts**

#### PORTS AND TRANSPORT DEPARTMENT

#### Notification

Sachivalaya, Gandhinagar, 16<sup>th</sup> November, 2018

#### Gujarat Road Safety Authority Act, 2018.

**No.PT/2018/20/MVD/102018/534/KH :** In exercise of the powers conferred by sub-section (2) of section 14 of the Gujarat Road Safety Authority Act, 2018 (Guj. 1 of 2018), the Government of Gujarat hereby specifies fees for the release of vehicles seized under clause (i) of sub-section (1) of the said section 14, as under :-

**TABLE**

| Sr.No. | Reason of Seizure  | Type of Vehicles              | Fees. (Rs.) |
|--------|--|-------------------------------|-------------|
| 1      | 2  | 3                             | 4           |
| 1      | Placement or positioning of any vehicle, on a public road or the movement of the Vehicles on a public road is likely to causes accident or cause obstruction to the free flow of traffic or distract to the attention or obstruct the vision of the driver of any vehicle. | 1. Two wheeler.               | 500/-       |
|        |  | 2. Three wheeler.             | 500/-       |
|        |  | 3. Four wheeler.              | 1000/-      |
|        |  | 4. Vehicles other than above. | 1000/-      |
| 2      | Vehicle used without the third party insurance.  | 1. Two wheeler.               | 1000/-      |
|        |  | 2. Three wheeler.             | 1000/-      |
|        |  | 3. Four wheeler.              | 2000/-      |
|        |  | 4. Vehicles other than above. | 3000/-      |
| 3      | Carrying of goods in a manner dangerous to public or carrying overload goods in a such a way to create or likely to create danger to public safety on road.  | 1. Two wheeler.               | 500/-       |
|        |  | 2. Three wheeler.             | 500/-       |
|        |  | 3. Four wheeler.              | 1000/-      |
|        |  | 4. Vehicles other than above. | 5000/-      |

By order and in the name of the Governor of Gujarat,

**S. R. SONI,**

Under Secretary to Government.





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### PART IV-A

Rules and Orders (Other than those published in Parts I, I-A, and I-L) made  
by the Government of Gujarat under the Central Acts

#### HOME DEPARTMENT

##### Notification

Sachivalaya, Gandhinagar, 17<sup>th</sup> November, 2018.

#### PRISON ACT, 1894.

**NO.GG/89/2018/JLM/502015/4203/J:-** In exercise of the powers conferred by sub-section (10) of section 59 read with section 6 of the Prison Act, 1894 (9 of 1894) and in supersession of all the rules made in this behalf, the Governor of Gujarat hereby makes the following rules to provide for regulating the conditions of service of persons appointed to the post of Jailor Group-II, Class III, in the subordinate services of the Gujarat Prisons and Correctional Administration, in so far as they relate to passing of the departmental examination, for promotion to the post of Jailor Group I, Class II namely:-

#### 1. Short title, commencement and application.-

- (1) These rules may be called the Jailor Group I, Class II (Departmental Examination) Rules, 2018.
- (2) They shall come into force on the date of their publication in the *Official Gazette*.
- (3) They shall apply to the persons who are appointed as Jailor Group II, Class III in the subordinate services of the Gujarat Prisons and Correctional Administration by promotion or otherwise:

#### 2. Definition.- In these rules, unless the context otherwise requires,:-

- (a) "Appendix" means Appendix appended to these rules;
- (b) "Board" means the Gujarat Subordinate Service Selection Board, Gandhinagar, or any other Board as may be constituted by the Government;
- (c) "Examination" means the departmental examination prescribed under these rules for promotion to the post of Jailor Group I, Class II;

(d) "relevant examination" means the respective departmental examination prescribed under these rules as a prerequisite for promotion to the post of a Jailor Group I, Class II;

(e) "Specified chances" means the number of chances specified in these rules within which a person is required to pass the examination;

(f) "Specified period" means the period specified in these rules within which a person is required to pass the examination.

### **3. Eligibility to appear in the Examination and availability of chances.-**

(1) To be eligible for promotion to the post of Jailor Group I, Class II, a person shall be required to pass the Examination within a period of three years and within three chances from the date of his/her completing three years continuous service after his/her regular appointment to the lower post:

Provided that, in case of person who has a last chance, if the period for passing the Examination as provided in these rule, expires before the date of holding the Examination, the said period shall be deemed to have been extended until the date of declaration of the result of the Examination.

Provided further, that a person belonging to the Scheduled Castes or Scheduled Tribes may be given one more chance which shall have to be availed of within a specified period of one year from the date of the expiry of the period mentioned in these rules,

(2) If a person fails to pass the Examination referred to in this rule within the specified period and specified chances, he shall, notwithstanding such failure, be eligible to appear at any time in the Examination on payment of an examination fee as may be determined by the Government from time to time and if he passes the said Examination, he shall be eligible for promotion:

Provided that a person shall not be entitled to claim seniority over those persons who have passed the relevant examination earlier than him and also have been promoted regularly to the higher post before he became eligible for such promotion on passing the relevant examination.

### **4. Venue of Examination and Mode of Examination.-**

(1) The Board shall on receiving the requisition from the Government, hold an Examination.

(2) The date, time and place of the Examination shall be fixed and communicated by the Board to Inspector General of Prisons, under intimation to the Secretary to the Government of Gujarat, Home Department and the Inspector General of Prisons shall communicate the same directly to the candidate under intimation to the Board.

(3) The candidate shall have to appear at the Examination at their own expense.

### **5. Paper and Syllabus.-**

The syllabus of the Examination shall be as specified in the Appendix-A. The examination shall consist of Multiple Choice Questions (MCQs).

### **6. Medium of the Examination.-**

The medium of the Examination shall be Gujarati or English as the instruction given in the question paper.

**7. Application for appearing in the Examination. -**

- (1) A person who desires to appear at the Examination shall submit his application in the Form as specified in Appendix-B to the Inspector General of Prisons for enlisting his name as a candidate for such Examination at least sixty days before the date of the commencement of the examination.
- (2) The Inspector General of Prisons shall scrutinize the application with regard to his eligibility for appearing at the Examination and forward the same to the Board along with the Certificate of Eligibility as specified in Appendix-C.
- (3) If the applicants subsequently decides not to appear at the Examination, he shall give intimation thereof to the Board through the Inspector General of Prisons, at least thirty days before the date of the commencement of the Examination.
- (4) In the event of any person failing to appear at the Examination after having enlisted his name as a candidate for appearing there at but without intimating as referred to in sub-rule (3) he shall be deemed to have lost one chance to pass the Examination.
- (5) The Board shall admit the candidate to the Examination on the strength of the certificate issued by the Inspector General of Prisons that he is eligible to appear at such Examination:

Provided that the Inspector General of Prisons may condone the failure on the part of the person to give intimation referred to in sub-rule (3), and the consequences arising there from if it is satisfied that the person had failed to give the intimation within time for reasons beyond his control.

**8. Qualifying Standard for passing Examination.-**

- (1) The standard for passing the Examination shall be fifty per cent. (50%) of the total marks assigned to each paper.
- (2) The Examination shall be given with books, except Paper-4 which shall be without books.

**Explanation.-** With books means original book of the subjects having bare Acts and or Rules without any commentaries or case laws and includes manual issued under the Act published by the Government of Gujarat.

- (3) An unsuccessful candidate who secures sixty per cent (60%) or more marks in any one or more papers shall be exempted from appearing in those papers at the subsequent Examination.
- (4) A candidate who has secured eighty per cent (80%) or more aggregate marks in the Examination shall be paid cash amount as an incentive as determined by the Government.

**9. Publication of result. -**

The Board shall publish the result of the Examination in the Gujarat Government Gazette and also communicate the same to the Secretary to the Government of Gujarat, Home Department and also to the Inspector General of Prisons. The Inspector General of Prisons shall intimate the result to the candidate.

**10. Prohibition to use certain devices in the exam hall.-**

The candidate shall not be allowed to carry with him any electronic communication devices like cellular phone, calculator, pager, etc. in the examination hall.

**APPENDIX - A**

(See rule 5]

**Syllabus for Departmental Examination of Jailor Group I, Class II****Paper I- Constitution of India and Service matters (MCQs)****Marks: 100****Duration: 2 Hours****With Book****1. Constitution of India with reference to, -**

- (1) Articles 309;
- (2) Provision of Panchayats and Municipalities with focus on amendment 73 and 74;
- (3) Election commission;
- (4) Finance commission;
- (5) Concurrent list and State list; and
- (6) Supreme Court and High Courts.

**2. The Gujarat Civil Services (Conduct] Rules, 1971 and The Gujarat Civil Service Rules (Discipline and Appeal] Rules, 1971.****3. The Gujarat Legislative Assembly Rules.****4. Current Five Year Plans with special reference to Gujarat.****5. Structure of Panchayati Raj in Gujarat, its powers and limitations.****Paper II- Financial Matters. (MCQs)****Marks: 100****Duration: 2 Hours****With Book**

1. The Gujarat Civil Service Rules, 2002; (G.C.S.R.), Vol. I to VIII;
2. The Gujarat Budget Manual, Part I and part II;
3. The Gujarat Treasury Rules, 2000;
4. Delegation of Financial Powers;
5. Purchase policy of Government of Gujarat;
6. Existing Higher Pay Scale Scheme.

**Paper III- Office Procedure; (MCQs)****Marks: 100****Duration: 2 Hours****With Book**

- 1] Rules of Business and instructions issued thereunder;
- 2] Manual of Office Procedure;
- 3] Organizing and structure of the machinery of the Government;
- 4] Performance Appraisal Report;
- 5] Instructions Roster Manual (How to prepare and maintain the roster register and allocation of roster points);
- 6] The Gujarat Civil Services Tribunal Act, 1972;
- 7] Right to Information act, 2005 (with all amendments).

**Paper IV- Gujarati and English language.****Marks: 100****Duration: 3 Hours****(Without Books)**

- |  |    |       |
|--|----|-------|
| 1) Essay in English and Gujarati.      | 15 | Marks |
| 2) Secretariat and field Relationship. | 10 | Marks |

- |   |    |       |
|---|----|-------|
| 3) High Court Matters-Preparation para wise<br>Remarks and Drafting of 'Speaking Orders'. | 10 | Marks |
| 4) Government Correspondence- different type of letters<br>and difference between them.   | 25 | Marks |
| 5) Grammar- English;  | 15 | Marks |
| Grammar-Gujarati -  | 15 | Marks |
| 6) Administrative Vocabulary- Gujarati and English<br>and its usage.                      | 10 | Marks |

**Paper V- Departmental Matters (MCQs)****Marks: 100****Duration: 2 Hours****With Book**

- (1) Bombay Jail Manual - 1955.
- (2) Bombay Jail Account Manual - 1956.
- (3) Prison Act-1894.
- (4) Prisoners Act - 1900.
- (5) Code of Criminal Procedure, - 1973.

**APPENDIX - B***(See rule 7(1))*

**Application for appearing at Departmental Examination for promotion to the post of Jailor Group I, Class II, to be held by the Gujarat Subordinate Services Selection Board.**

|     |  |  |
|-----|--|--|
| 1.  | Applicant's name in full (Surname first) (In English and Gujarati).  |  |
| 2.  | Designation (In English and Gujarati).   |  |
| 3.  | Name of the office in which at present serving.  |  |
| 4.  | Birth date and age at the time of this examination.  |  |
| 5.  | Date of appointment and total years of service.  |  |
| 6.  | Whether the applicant had appeared at the examination previously, if so-   |  |
|     | (a) Month and year of examination at which he appeared.  |  |
|     | (b) Whether any exemption is earned. If so, details of marks, Year of examination and subject should be given.   |  |
|     | (c) Whether the applicant intends to avail of exemption earned? State "Yes" of "No" (The choice will be treated as final and no change shall be allowed).  |  |
| 7.  | Authority of the Rule under which the applicant has to appear for the examination.   |  |
| 8.  | Number of chances and time limit within which the applicant is required to pass the examination (date of expiry of the period for appearing at the examination should be mentioned).                 |  |
| 9.  | Number of tries exhausted.   |  |
| 10. | Whether additional chance has been granted? number and date of orders, under which the additional chance has been granted to the applicant should be specified and a copy therefore should be sent). |  |
| 11. | Purpose of passing the examination (e.g. confirmation, retention in Government service, promotion etc.).   |  |
| 12. | Whether the applicant is eligible to appear at the examination according to the rules of the Departmental examination.   |  |
| 13. | Number and date of order relaxing age and service limit from competent authority (copies of orders should be attached).  |  |
| 14. | Remarks, if any.   |  |

Place:

Date:

(                      )  
Signature of applicant

**APPENDIX - C**  
(See rule 7(2))  
**CERTIFICATE OF ELIGIBILITY**

Certified that -

(1) The above particulars are verified and found correct. Shri/Smt./Kum.....  
is eligible to appear at the examination for promotion to the post of Jailor Group I, Class II to be held in ....20....

(2) \* Necessary fee is paid, copy of Challan is attached here with.

(3) \*Candidate is granted additional chance, a copy of order is attached.

Place: .....

Date: .....

(Signature and designation of the Head  
of Department/Office)

\* Strike out whichever is not applicable.

By order and in the name of the Governor of Gujarat,

**MAHENDRA R. SONI,**  
Deputy Secretary to Government.

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### PART IV-A

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### HOME DEPARTMENT

#### Notification

Sachivalaya, Gandhinagar, 28<sup>th</sup> November, 2018.

#### Protection of Human Rights Act, 1993

**No. GG/94/2018/GHRC-122012/359/HR :-** In exercise of the power conferred by section -41 read with section- 26 of the Protection of Human Rights Act, 1993 (10 of 1994), the Government of Gujarat hereby makes the following rules further to amend the Gujarat State Human Rights Commission Chairperson and Members (Salaries, Allowances and other Conditions of Service) Rule, 2014, namely: -

1. These rules may be called the Gujarat Human Rights Commission Chairperson and Members (Salaries, Allowances and other Conditions of Service) (1<sup>st</sup> amendment) Rules, 2018.
2. In the Gujarat State Human Rights Commission Chairperson and Members (Salaries, Allowances and other Conditions of Service) 2014, rule -9 shall be deleted.

By order and in the name of the Governor of Gujarat,

**MAHENDRA R. SONI,**  
Deputy Secretary to Government.

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#### FOOD, CIVIL SUPPLIES AND CONSUMER AFFAIRS DEPARTMENT

#### Notification

Sachivalaya, Gandhinagar, 29<sup>th</sup> November, 2018

#### CONSUMER PROTECTION ACT, 1986.

**No. GTH/2018/32/CPA/102018/92196 /D:**— In exercise of the powers conferred by clause (a) of section 9 read with sub- section (1) (a), 1 (A) and (2) of section-10 of the Consumer Protection Act, 1986 as amended in 1993 and 2002, Government of Gujarat hereby appoints following members to District Consumer Disputes Redressal Forum.

| Sr. No. | Name of Member    | Place of Appointment and Head Quarter (District Consumer Redressal Forum) | Tenure   |
|---------|-------------------|---|--|
| (1)     | (2)               | (3)   | (4)  |
| 1       | Smt. R. M. Parekh | CDRF, Anand   | for a period of 5 years or the age of 65 years, whichever is earlier |
| 2       | Shri J. P. Joshi  | CDRF, Gandhinagar   |  |
| 3       | Smt. M. R. Mehta  | CDRF, Panchmahal  |  |

**Terms and conditions for the above appointment is as below:-**

- (1) The terms and conditions shall be applicable as decided in the G.R. No: CPA/ 1098/2860/D, dated 30/11/2004, G.R. NO: CPA/ 1098 /2860/D, dated 15/2/ 2006 and 7/8/ 2006 and Notification No: GTH/2014/38/CPA/102013 /480323/D dated 1/12/2014 issued by the State Government.
- (2) In case the candidate recommended for appointment is an advocate, then he/she invariably deposit the 'Sanad' with the Bar Council and the same will lie deposited with the Bar Council so long as the candidate holds the post of the Member of the District Forum.



- (3) He/She should perform his/her duties as Member of the Forum efficiently, honestly and with full ability and integrity.
- (4) His/her appointments as non-judicial Member of the District Forum is on full time basis.
- (5) If his/her performance is poor and not satisfactory, he/she will be removed.
- (6) Involvement of the appointed candidate in any other activity than functioning as non judicial member of the District Forum will amount to cancellation of his/her appointment.

By order and in the name of the Governor of Gujarat,

**P. N. MEHTA,**

Section Officer,

Food, Civil Supplies & Consumer Affairs Department.

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**Rule and Orders (Other than those published in Parts I, I-A, and I-L) made  
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### **FOOD, CIVIL SUPPLIES AND CONSUMER AFFAIRS DEPARTMENT**

#### **Notification**

Sachivalaya, Gandhinagar, 29<sup>th</sup> November, 2018

#### **CONSUMER PROTECTION ACT, 1986.**

**No.GTH/2018/33/CPA/102018/603113/D:** In exercise of the powers conferred by clause (1/2) of section 16 of the Consumer Protection Act, read with Gujarat Consumer Protection Rules 1988 section 7(5-D & E). Government Of Gujarat has decided to terminate the services of Mr. V.K.Shah, judicial member of Consumer Dispute Redressal Commission, Ahmedabad with immediate effect.

By order and in the name of the Governor of Gujarat,

**P. N. MEHTA,**

Section Officer,

Food, Civil Supplies & Consumer Affairs Department.

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### **FOOD, CIVIL SUPPLIES AND CONSUMER AFFAIRS DEPARTMENT**

#### **Notification**

Sachivalaya, Gandhinagar, 29<sup>th</sup> November, 2018

#### **CONSUMER PROTECTION ACT, 1986.**

**No.GTH/2018/34/CPA/102018/603113/D:-** In exercise of the powers conferred by clause (1/3) of section 10 of the Consumer Protection Act, read with Gujarat Consumer Protection Rules 1988 section 3(5-D & E). Government Of Gujarat has decided to terminate the services of Mr. C.R.Thakkar, President of Consumer Dispute Redressal Forum Bhavnagar with immediate effect.

By order and in the name of the Governor of Gujarat,

**P. N. MEHTA,**

Section Officer,

Food, Civil Supplies & Consumer Affairs Department.

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**FOOD, CIVIL SUPPLIES AND CONSUMER AFFAIRS DEPARTMENT****Notification**

Sachivalaya, Gandhinagar, 29<sup>th</sup> November, 2018

**CONSUMER PROTECTION ACT, 1986.**

**No.GTH/2018/35/CPA/102018/603113/D:-** In exercise of the powers conferred by clause (1/3) of section 10 of the Consumer Protection Act, read with Gujarat Consumer Protection Rules 1988 section 3(5-D & E).Government Of Gujarat has decided to terminate the services of Ms. Preeti Pandya, non-judicial member of Consumer Dispute Redressal Forum Gandhinagar with immediate effect.

By order and in the name of the Governor of Gujarat,

**P. N. MEHTA,**

Section Officer,

Food, Civil Supplies & Consumer Affairs Department.

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### PART IV-A

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#### HEALTH AND FAMILY WELFARE DEPARTMENT

#### Notification

Sachivalaya, Gandhinagar, 16<sup>th</sup> November, 2018.

#### REGISTRATION OF BIRTHS AND DEATHS ACT, 1969.

**No-GP-14-JNM-102017-757-B.1:-** in exercise of the powers conferred by of section 30 of the Registration of Birth and Death Act, 1969 (Act No. 18 of 1969), with the approval of the Central Government and in suppression of all the existing rules made in this behalf, the Government of Gujarat hereby makes the following rules namely:-

1. **Short title and commencement:** (1) These rules may be called the Gujarat Registration of Birth and Death Rules, 2018. (2) They shall come Into force on the date of their publication in the *official Gazette*.
2. **Definitions:** In these rules, unless the context otherwise requires,
  - (a) "Act" means The Registration of Birth and Death Act, 1969
  - (b) "Form" means a form appended to these rules.
3. **Period of gestation:** The period of gestation for the purposes of clause (g) of sub-section (1) of section-2 of the Act shall be twenty-eight weeks.
4. **Submission of report:** The report under sub-section (4) of section 4 of the Act shall be prepared in the prescribed form and shall be submitted along with the statistical report referred to in subsection (2) of section 19 of the Act, to the State Government by the Chief Registrar for every year by the 31<sup>st</sup> July of the following year to which the report relates.
5. **Information of birth and death**
  - (1) The information required to be given to the registrar under section 8 or section 9 of the Act, as the case may be, shall be in Form No. 1, 2 and 3 for registration of a birth, death and still-birth respectively, hereinafter to be collectively called the reporting forms.

Information if given orally shall be entered by the registrar in the appropriate reporting forms and the signature or thumb impression of the informant obtained.

- (2) The part of the reporting forms containing legal information shall be called the 'Legal Part' and the part containing statistical information shall be called the 'Statistical Part'.
- (3) The information referred to in sub-rule (1) shall be given within twenty one days from the date of birth, death and still-birth.

#### **6. Birth or death in a vehicle**

- (1) In respect of a birth or death in a moving vehicle, the person in-charge of the vehicle shall give or cause to be given the information under sub-section (1) of section 8 of the Act at the first place of halt.

Explanation - For the purpose of this rule the term "Vehicle" means conveyance of any kind used on land, air or water and includes an aircraft, a boat, a ship, a railway carriage, a motor-car, a motor-cycle, a cart, a tonga and a rickshaw.

- (2) In case of death (not falling under clauses (a) to (e) of sub-section (1) of section-8 of the Act in which an inquest is held, the officer who conducts the inquest shall give or cause to be given the information under sub-section (1) of section 8 of the Act.

#### **7. Form of Medical Certification of Cause of Death**

The certificate as to the cause of death required under sub-section (3) of section 10 of the Act, shall be issued in Form 4 or 4A and the registrar shall, after making necessary entries in the register of death, forward all such certificates to the Chief Registrar or the officer specified by him in this behalf by the 10<sup>th</sup> of the month immediately following the month to which the certificates relates.

#### **8. Extracts of registration entries**

- (1) The exact of particulars from the register relating to Birth or Death to be given to an informant under section 12 of the Act, shall be in Form 5 or Form 6, as the case may be.
- (2) In the case of domiciliary events of birth and death referred to in clause (a) of sub-section (1) of section 8 of the Act which are reported direct to the Registrar of Birth and Death, the head of the house or household as the case may be, or, in his absence, the nearest relative of the head present in the house may collect the extract of birth or death from the registrar within thirty days of its reporting.
- (3) In the case of domiciliary event of birth and death referred to in clause (a) of sub-section (1) of section 8 of the Act, which are reported by persons specified by the State Government under sub-section (2) of the said section of the Act, the person so specified shall transmit the extracts received from the Registrar of Birth and Death to the concerned head of the house or household as the case may be, or in his absence, the nearest relative of the head present in the house within thirty days of its issue by the Registrar.
- (4) In the case of institutional events of birth and death referred to in clauses (b) to (e) of sub-section (1) of section 8 of the Act, the nearest relative of the new born or deceased may collect the extract from the officer or person incharge of the institutions concerned within thirty days of the occurrence of the event of birth or death.
- (5) If the extract of birth or death is not collected by the concerned person as referred to in sub-rules (2) to (4) of this rule, within the period stipulated therein, the Registrar or the officer or person incharge of the concerned institution as referred to in sub-rule (4) shall transmit the same to the concerned family by post within fifteen days of the expiry of the aforesaid period.

**9. Authority for delayed registration and fee payable therefor**

- (1) Any birth or death of which information is given to the registrar after the expiry of the period specified in rule 5, but within thirty days of its occurrence, shall be registered on payment of a late fee of rupees two.
- (2) Any birth or death of which information is given to the registrar after thirty days but within one year of its occurrence, shall be registered only with the written permission of the Municipal Commissioner for Municipal Corporation areas, District Registrar of Birth and Death and Chief District Health Officer or District Health Officer for Nagar Palika, Cantonment, Independent area and Industrial areas and for rural areas the Taluka Registrar of Birth and Death and the Taluka Development Officer and on payment of a late fee of rupees five.
- (3) Any birth or death which has not been registered within one year of its occurrence, shall be registered only on an order of an Executive Magistrate and on payment of a late fee of rupees ten.

**10. Period for delayed registration of name of child section 14:**

- (1) Where the birth of any child had been registered without a name, the parent or guardian of such child shall, within twelve months from the date of registration or the birth of child, give information regarding the name of the child to the Registrar either orally or in writing:

Provided that if the information is given after the aforesaid period of twelve months but within period of fifteen years, which shall be reckoned from the date of commencement of this rule, the Registrar shall -

- (1) (a) If the register is in his possession forth with enter the name in the relevant column of the concerned form in the birth register on payment of a late fee of rupees five.
- (b) If the register is not in his possession and if the information is given orally, make a report giving necessary particulars and if the information is given in writing, forward the same to the officer specified by the State Government in this behalf for making the necessary entry on payment of a late fee of rupees five.
- (2) The parent or the guardian, as the case may be, shall also present to the Registrar the copy of the extract given to him under section 12 or a certified extract issued to him under section 17 and on such presentation the Registrar shall make the necessary endorsement relating to the name of the child or take action as laid down in clause (b) of the proviso to sub-rule (1) of this rule.

**11. Correction or cancellation of entry in the register of birth and Death**

- (1) If it is reported to the Registrar that a clerical or formal error has been made in the register or if such error is otherwise noticed by him and if the register is in his possession, the Registrar shall inquire into the matter and if he is satisfied that any such error has been made, he shall correct the error (by correcting or cancelling the entry) as provided in section 15 of the Act and shall send an extract of the entry showing the error and how it has been corrected to the District Registrar of Birth and Death.
- (2) In the case referred to in sub-rule (1) if the register is not in the possession the Registrar, he/she shall make a report to the District Registrar of Birth and Death and call for the relevant register and after inquiring into the matter, if he is satisfied that any such error has been made, make the necessary correction.
- (3) Any such correction as mentioned in sub-rule 2 shall be countersigned by the District Registrar of Birth and Death when the register is received from the Registrar.
- (4) If any person asserts that any entry in the register of Birth and Death is erroneous in substance, the Registrar may correct the entry in the manner as specified in section 15 of the Act upon production by that person a declaration setting forth the nature of the error and true facts of the case made by two credible persons having knowledge of the facts of the case.

(5) Notwithstanding anything contained in sub-rule (1) and sub-rule (4), the Registrar shall make report of any correction of the kind referred to therein giving necessary details to the District Registrar of Birth and Death.

(6) If it is proved to the satisfaction of the Registrar that any entry in the register of birth and death has been made fraudulently or improperly, he shall make a report giving necessary details to the officer authorized by the Chief Registrar by general or special order in this behalf under section 25 of the Act and on hearing from him take necessary action in the matter.

(7) In every case in which any entry is corrected or cancelled under this rule, intimation thereof should be sent to the permanent address of the person who has given information under section 8 or section 9 of the Act.

## **12. Form of register**

(1) The register of Birth, Death and still-Birth to be maintained by the Registrars under section 16 of the Act may either be in paper form or electronic form or both. The Registers shall be in three parts containing the items as set out in Form 7, 8 and 9 respectively for Birth, Death and still-Birth and in each part of the register, the events shall be numbered serially for each calendar year.

(2) The registers maintained in electronic form shall have the facilities for extraction of items of information, correction and cancellation, if needed.

(3) A new register shall be opened on the first day of January of each year.

(4) An event which occurred in any previous year shall be recorded in the register for the year in which it is reported -

Provided that no entry shall be interpolated between two entries recorded earlier.

## **13. Fees and postal charges**

(1) The fees payable for a search to be made, an extract or a non-availability certificate to be issued under sub-section (1) of section 17, shall be as follows:

|  | <b>Rs.</b> |
|--|------------|
| (a) Search for a single entry in the first year for which the search is made | 2.00       |
| (b) For every additional year for which the search is continued              | 2.00       |
| (c) For granting extract relating to each birth or death                     | 5.00       |
| (d) For Granting non-availability certificate of birth or death              | 2.00       |

(2) Any such extract in regard to a birth or death shall be issued by the Registrar or the officer authorized by the State Government in this behalf in Form 5 or in Form 6 as the case may be and shall be certified in the manner provided for in section 76 of the Indian Evidence Act, 1872 (1 of 1872).

(3) If any particular event or death is not found registered, the Registrar shall issue a non-availability certificate in Form 10.

(4) Any such extracts or non-availability certificate may be furnished to the person asking for it or sent to him by post on payment of the postal charges thereof.

## **14. Interval and forms of periodical returns**

(1) Every Registrar shall after completing the process of registration send all the statistical parts of the reporting forms relating to each month alongwith a summary monthly report in Form 11 for Birth, Form 12 for Death and Form 13 for still-Birth to the Taluka Registrar of Birth and Death on or before the 5<sup>th</sup> of the following month and Taluka Registrar shall send the reports alongwith the

summary of taluka to the District Registrar on or before the 8<sup>th</sup> of the following month. The District Registrar shall send the consolidated statistical abstract to the Chief Registrar by 10<sup>th</sup> of the following month.

(2) All officers so specified including Municipal Corporations, Municipalities and independent areas shall forward all such statistical parts of the reporting forms received by him to the Chief Registrar not later than the 10<sup>th</sup> of the month in a manner as specified by the State Government in this behalf.

### **15. Statistical report**

The statistical report under sub-section (2) of section 19 shall contain the tables in the prescribed list append to these rules and shall be compiled for each year before the 31<sup>st</sup> July of the year immediately following and shall be published as soon as may be thereafter but in any case not later than five months from that date.

### **16. Conditions for compounding offences**

(1) Any offence punishable under section 23 of the Act may, either before or after the institution of criminal proceedings under this Act, be compounded by an officer authorized by the Chief Registrar by a general or special order in this behalf, if the officer so authorized is satisfied that the offence was committed through inadvertence or oversight or for the first time.

(2) Any such offence may be compounded on payment of such sum, not exceeding rupees fifty for offences under sub-section (1), (2) and (3) and rupees ten for offence under sub-section (4) of section 23 of the Act, as the said officer may think fit.

### **17. Registers and other records**

(1) The Register the Births, the Register of Deaths and the Register of Still-Births shall be records of permanent importance and shall not be destroyed.

(2) The legal parts of the reporting Forms 1, 2 and 3 prescribed under rule 5 received by the registrars under section 8 and 9 of the Act and the court orders and the orders of the specified authority granting permission for delayed registration under section 13 received by the registrars, shall form integral part of the register of birth, death and still-birth and shall not be destroyed -

Provided that in a case, where the information so received has been entered in the said registers by the registrar and such entry is signed or marked by the thumb impression by the informant in such register, the document relating to the information so received shall be preserved for a minimum period of five years.

(3) The certificate as to the cause of death furnished under sub-section (3) of section 10 of the Act shall be retained for a period of atleast five years by the Chief Registrar or the respective Registrar of Birth and Death of the concerned area.

(4) Every Register of births, Register of deaths and Register of still-births shall be retained by the Registrar in his office for a period of twelve months after the end of the calendar year to which it relates and such registers shall thereafter be transferred for safe custody to the Taluka Registrar of Births and Deaths and Taluka Development Officer for rural areas and the respective Registrar of Births and Deaths for urban areas.

By order and in the name of the Governor of Gujarat,

**A.A. BADI,**

Under Secretary to Government.

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## EXTRAORDINARY

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### PART IV-A

Rule and Orders (Other than those published in Parts I, I-A, and I-L) made  
by the Government of Gujarat under the Central Acts

ગૃહ વિભાગ

જાહેરનામું

સચિવાલય, ગાંધીનગર, રાજ્ય નવેમ્બર, ૨૦૧૮.

હોજદારી કાર્યરીતિ અધિનિયમ-૧૯૭૩

ક્રમાંક : ૭૭/૨૦૧૮/૮૫/વિ-૨/કમબ/૨૪૮૦/૨૭૫૧-ભાગ-૩ :- સબડીવીઝનલ મેજિસ્ટ્રેટશ્રી, સિંધપુરે હોજદારી કાર્યરીતિ અધિનિયમ-૧૯૭૩ ની કલમ-૧૪૪ હેઠળ કરેલા અને આ સાથેની અનુસૂચિમાં ફરી જણાવેલ તા. ૨૭/૦૮/૨૦૧૮ના હુકમ ક્રમાંક: પીઓએલ/પ્રતિબંધ/વશી/રૂઢમહાલય જાહેરનામું/૧૮ જેનો આમાં હવે પછી સદરહુ હુકમ તરીકે ઉલ્લેખ કર્યો છે. તેમાં નોર્ટિફિકેશન કરેલા વિસ્તારમાં હુલ્લડ અને બજેડો અટકાવવા માટે ગુજરાત સરકારે તેમ કરવું જરૂરી જણાય છે.

તેથી હવે સદરહુ અધિનિયમની કલમ-૧૪૪ ની પેટાકલમ (૪)ના પરંતુકથી મળેલ સત્તાની રૂએ ગુજરાત સરકાર આથી હુકમ કરે છે કે, સને - ૨૦૧૮ના નવેમ્બર માસની રજમી તારીખે સદરહુ હુકમ જેની મુદત આ જાહેરનામું ન હોત તો પૂરી થઈ ગઈ હોય તે સને-૨૦૧૮ ના નવેમ્બર માસની રજમી તારીખે અને તે તારીખથી વધુ છ મહિનાની મુદત અર્થાત તા.૨૭/૦૫/૨૦૧૮ સુધી અમલમાં રહેશે.

ગુજરાતના રાજ્યપાલશ્રીના હુકમથી અને તેમના નામે,

પંકજ દવે,

સરકારના ઉપસચિવ.

## અનુસૂચિ

હોજદારી કાર્યરીતી અધિનિયમ-૧૯૭૪-૭૮ ના એક્ટ-૨ ની કલમ-૧૪૪ અન્વયે કાઢેલ હુકમ

નં. પીઓ એલ/પ્રતિબંધ/વશી/રૂઢમહાલય જહેરનામુ/૧૮.

સિદ્ધપુર ઐતિહાસિક રથળ રૂઢમહાલય આવેલ છે. તેની બાજુમાં એક મરિજદ આવેલ છે. જે જુમ્મા મરિજદ તરીકે ઓળખાય છે અને તે મિલકતો ભારત સરકારના પુરાતત્વ ખાતા રક્ષિત ઈમારત તરીકે જહેર કરાયેલ છે અને તે ઈમારતો ઉપયોગ સારું હિન્દુ તથા મુસલમાનોની કોમો વચ્ચે સિદ્ધપુરમાં ઘણીવાર ભારે તંગ પરિસ્થિતિ પેદા થાય છે. અને તે હાલ પ્રવર્તે છે. આ બાબતે નામદાર ગુજરાત સરકારે અગાઉ પ્રતિબંધિત વિસ્તાર તરીકે જહેરનામું બહાર પાડેલ છે. જે જહેરનામાની મુદત પુરી થાય છે. તેથી બન્ને કોમો તરફથી રૂઢમહાલય અને જુમ્મા મરિજદમાં પુજ કરવા અને નમાજ પઢવા જય તેમ માનવાને કારણ છે. બંને કોમો વચ્ચે ફરીથી તંગદિલી ઉભી થવા સંભવ છે. જેથી જહેર સુલેહ શાંતિનો ભંગ થતો અટકાવવાનું ઈષ્ટ જણાય છે અને તેમ થતું તાત્કાલીક અટકાવવા ઝડપી ઉપાય ચોજવાનું ઈચ્છનીય છે.

વાસ્તે હું જે.એમ. તુવાર, સબ ડીવીઝનલ મેજિસ્ટ્રેટ, સિદ્ધપુરને મળેલ ખાસ સત્તાની રૂએ આથી હું ફરમાવું છું કે, નીચે અનુસંધાનવાળા જણાવેલ મિલકતોમાં તારીખ: ૨૮/૦૮/૨૦૧૮ના રોજથી ૩૦ દિવસ સુધી, તા.૨૩/૧૧/૨૦૧૮ સુધી સદર મિલકતોમાં અગર તેની અંદર આવેલ કોઈપણ રથળે કોઈપણ રીતે ઉપયોગ કરવો નહિ તેનો પ્રતિબંધ ફરમાવું છું.

મિલકતોના વિસ્તારની ચર્તુસીમા

પૂર્વ દિશા :- ઘર નં. ૧/૧૦/૮૪ ની પછીત નદીમાં જવાનો રસ્તો તથા ઘર નં. ૧/૧૦/૮૫ નો કરો.

પશ્ચિમ દિશા :- રૂઢમહાલય તથા મરજીદની હદથી રસ્તો દેસાઈના મહાડ તરફ જવાનો તથા ત્યાંથી વહોરવાડ તરફ જવાનો રસ્તો મુકી ઘર નં. ૧/૧૦/૪૩, ૧/૧૦/૪૪ તથા ૧/૧૦/૪૫ની પછીત તથા બારણું.

ઉત્તર દિશા :- રૂઢમહાલય તથા મહોલ્લામાં ઘર નં. ૧/૧૦/૭૨ થી ૧/૧૦/૭૩ ના મકાનની પછીત તથા પસવાદળની પોળ તરફ જવાનો રસ્તો જે દેસાઈના માઢ તરફ જય છે. તેની બીજી બાજુએ ઘર નં. ૧/૧૧/૮૫ થી ૧/૧૧/૧૦૦ ના મકાનોના આગળનો ભાગ.

દક્ષિણ દિશા :- જુની વહોરવાડ તથા દેસાઈના માઢ તરફ જવાનો રસ્તો ઓળંગી ઘર નં. ૧/૫/૫ તથા ૧/૫/૬ નો આગળનો ભાગ તથા બારણા તથા ત્યારબાદ રસ્તો મુકીને ઘર નં. ૧/૧૦/૪૬ના મકાનનો કરાનો ભાગ.

સદરહુ હુકમનો ભંગ કરનાર ભારતના હોજદારી અધિનિયમની કલમ-૧૮૮ મુજબની શિક્ષાને પાત્ર થશે. આ ગુનો કોર્પોરેશનલ બિન જમીન લાયક ગુનો છે. આ હુકમ જિલ્લા મેજિસ્ટ્રેટશ્રી, પાટણ, જિલ્લા પોલીસ વડાશ્રી, પાટણ તથા એક્ઝિક્યુટીવ મેજિસ્ટ્રેટશ્રી, સિદ્ધપુર અથવા આ અર્થે તેમને અધિકૃત કરેલા અધિકારીઓ પાસેથી પરમીટ ધરાવનાર વ્યક્તિઓને લાગુ પડશે નહીં. અગર હરજ ઉપર હાજર રહેનાર પુરાતત્વ ખાતાના તથા રાજ્ય સરકારના અધિકારીઓ તથા નોકરોને લાગુ પડશે નહીં.

આજ તા.૨૭/૦૮/૨૦૧૮ના રોજ મારી સહી તથા સિક્કો કરી આપેલ છે.

જે. એમ. તુવાર,  
સબ ડીવીઝનલ મેજિસ્ટ્રેટ,  
સિદ્ધપુર

ગુજરાતના રાજ્યપાલશ્રીના હુકમથી અને તેમના નામે.

પંકજ દવે,  
સરકારના ઉપસચિવ,

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### PART IV-A

Rules and Orders (Other than those published in Parts I, I-A, and I-L) made  
by the Government of Gujarat under the Central Acts

#### LEGAL DEPARTMENT

##### Notification

Sachivalaya, Gandhinagar, 30<sup>th</sup> November, 2018.

#### **SCHEDULED CASTES AND THE SCHEDULED TRIBES (PREVENTION OF ATROCITIES) ACT, 1989.**

**NO.GK/57/2018/SCT/102016/2599/D** :- In exercise of the powers conferred by the first proviso to sub-section (1) of section 14 of the Scheduled Castes and the Scheduled Tribes (Prevention of Atrocities) Act, 1989, (33 of 1989), (herein after referred to as "the said Act"), the Government of Gujarat with the concurrence of the Chief Justice of High Court of Gujarat hereby specifies the Court of Additional District and Sessions Judge, Botad District, to be a Special Court to try the offences under the said Act.

By order and in the name of the Governor of Gujarat,

**H. H. VARMA,**

Deputy Secretary to Government.

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# The Gujarat Government Gazette

## EXTRAORDINARY

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### PART IV-A

**Rules and Orders (Other than those published in Parts I, I-A, and I-L) made  
by the Government of Gujarat under the Central Acts**

#### SPORTS AUTHORITY OF GUJARAT

#### Notification

Sachivalaya, Gandhinagar, 7<sup>th</sup> December, 2015.

**No. SAG/GOVERN/01.**— In exercise of the powers conferred under sub clause (vii) of clause (b) of rule 34 of the Rules and Regulations in Memorandum of Sports Authority of Gujarat, the Governing Body of Sports Authority of Gujarat hereby makes the following rules to provide for regulating recruitment to the post of **District Coach** under the Sports Authority of Gujarat, namely:

1. These rules may be called the District Coach Recruitment Rules-2015 in the Sports Authority of Gujarat. Recruitment Rules-2015.
2. Appointment to the post of District Coach in the Sports Authority of Gujarat shall be made either,
  - (a) by direct Selection, or
  - (b) by temporary transfer on deputation basis from amongst the persons working on the cadre of coach in the State Government or Central Government or Government undertaking Board or Corporation, who possess qualifications as prescribed in rule(b) of rule-3.
3. To be eligible for appointment by direct selection to the post mentioned in rule 2, a  
Candidate shall-
  - (a) not more than 36 years of age:  
Provided that upper age limit may be relaxed in favour of a candidate who is already in the service of Government of Gujarat in accordance with the provisions of the Gujarat Civil Services Classification and Recruitment (General) Rules, 1967
  - (b) Possess
    - (i) A bachelors degree obtained from any of the recognized universities or institutions established or incorporated by under the central or state Act in India or any other educational institutes recognized as such or declared to be a deemed University under section 3 of the University Grants Commission Act, 1956, and
    - (ii) a one year coaching diploma in concerned games or sports, obtained from Netaji Subhash National Institute of Sports, Patiala or from its recognised sub-Centers; or

- (iii) A Post graduate diploma in concerned games or sports, obtained from Lakshmibai National Institute of Physical Education, Gwalior, or from its recognised sub-centers; or
- (iv) A diploma or post graduated diploma in concerned games or sports obtained from Swarnim Gujarat Sports University, Gandhinagar; or
- (v) A diploma or post graduate diploma in concerned games or sports, obtained from any University established or incorporated by or under the central or state Act in India or any other educational institution recognised as such by government or declared to be a deemed University under Section 3 of the University Grants Commission Act, 1956:

Provided that in case of a sportsperson having bachelors degree and who has participated and stood either first or second or third or who has been member of a team which has ranked first or second or third in recognised national sports event or who has represented India in an individual or team event in a recognised international sports event, may be considered subject to acquire educational qualification as prescribed in rule 3 (b) (i) and (ii) or(iii) or (iv) or (v) above, within four years from the date of his joining service in Sports Authority of Gujarat, failing to which his services shall stand terminated.

**Explanation:** For the purpose of these rules:

- (a) Recognised international sports event means (i) Olympic Games organised by International Olympic committee or (ii) Asian Games organised by Asian Games organising committee or (iii) Asian Championship for seniors or juniors organised by recognised Asian Association of respective game and sports or (iv) Common Wealth Games organised by Common Wealth federation or (v) Common Wealth Championship for seniors or Juniors organised by recognised Association of respective game and sports and (vi) World Championship for seniors or juniors organised by recognised International Association.
- (b) Recognised national sports event means (i) national games organised by Indian Olympic Association or (ii) national championship for seniors organised by respective game and sports Federation or Association, recognised by Government of India.
- (c) Possess the basic knowledge of computer application as prescribed in the Gujarat Civil services classification and recruitment (General) rules, 1967.
- (d) Possess adequate knowledge of Gujarati or Hindi or both.
- 4. Provided that a candidate selected amongst the sportspersons under the proviso of rule 3(b) above, shall during his probation period acquire the diploma or post graduate diploma as prescribed in sub clause(ii) to (v) of sub rule(b) of rule-3.
- 5. The candidate appointed by direct selection shall be required to pass the examination in Hindi or Gujarati or both in accordance with the rules as may be prescribed by the Sports Authority of Gujarat.
- 6. The candidate appointment by direct selection shall, during his probation period, require to undergo pre-service training and shall require to pass post training field test as may be decided by Sports Authority of Gujarat, from time to time.
- 7. The candidate appointed by direct selection shall, during his probation period, require to pass the qualifying examination for computer knowledge, as may be prescribed by Sports Authority of Gujarat.
- 8. The selected candidate shall be required to furnish a security and surety bond in such form for such amount and for such period as may be prescribed by Sports Authority of Gujarat.

By order of the Governing Body of the Sports Authority of Gujarat,

(Sd)/- **Illegible**,  
Director General  
Sports Authority of Gujarat  
Gandhinagar.



सत्यमेव जयते

# The Gujarat Government Gazette

**EXTRAORDINARY**  
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## PART IV-A

**Rules and Orders (Other than those published in Parts I, I-A, and I-L) made  
by the Government of Gujarat under the Central Acts**

### LABOUR AND EMPLOYMENT DEPARTMENT

#### Notification

Sachivalaya, Gandhinagar, 11<sup>th</sup> December, 2018.

#### CHILD AND ADOLESCENT LABOUR (PROHIBITION AND REGULATION) ACT 1986.

**No.:KHR/2018/268/ECA/122016/785681/M(3):-** In exercise of the powers conferred by section 17 of the Child and Adolescent Labour (Prohibition and Regulation) Act, 1986 (61 of 1986) and in supersession of all the previous notifications issued in this behalf, the Government of Gujarat hereby appoints the following officers as shown in column 2 of the Schedule appended hereto, to be the Inspectors for the areas specified against each of them in column 3 of the said Schedule for the purposes of securing compliance with the provisions of the aforesaid Act.

#### SCHEDULE

| Sr. No. | Designation of Officer.   | Area of Jurisdiction.                  |
|---------|---|--|
| 1       | 2   | 3                                      |
| 1.      | The Director of Labour, Gujarat State, Gandhinagar.   | Whole State of Gujarat                 |
| 2.      | The Additional Commissioner of Labour, Gujarat State, Gandhinagar.                                  | Whole State of Gujarat                 |
| 3.      | The Deputy Commissioner of Labour, Gujarat State, Gandhinagar.                                      | Whole State of Gujarat                 |
| 4.      | The Assistant Commissioner of Labour, Gujarat State, Gandhinagar.                                   | Whole State of Gujarat                 |
| 5.      | The Government Labour Officer, Gujarat State, Gandhinagar.  | Whole State of Gujarat                 |
| 6.      | All the Deputy Commissioners of Labour.<br>(Except the Deputy Commissioner of Labour, Gandhinagar.) | Their respective areas of Jurisdiction |

|     |  |  |
|-----|--|--|
| 7.  | All the Assistant Commissioners of Labour. (Except the Assistant Commissioner of Labour, Gandhinagar.)   | Their respective areas of Jurisdiction |
| 8.  | All the Government Labour Officers. (Except the Government Labour Officer, Gandhinagar.)   | Their respective areas of Jurisdiction |
| 9.  | All the Officers working in the Office of the Director, Industrial Safety and Health, Gujarat State.   | Their respective areas of Jurisdiction |
| 10. | All the Deputy Commissioners of Labour, Assistant Commissioners of Labour, Government Labour Officers, Assistant Government Labour Officers working under the Rural Labour Commissionrate. | Their respective areas of Jurisdiction |

By order and in the name of the Governor of Gujarat,

**R. H. VASAVA,**  
Deputy Secretary to Government.

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# The Gujarat Government Gazette

## EXTRAORDINARY

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### PART IV-A

**Rule and Orders (Other than those published in Parts I, I-A, and I-L) made  
by the Government of Gujarat under the Central Acts**

#### FOREST AND ENVIRONMENT DEPARTMENT

##### Notification

Sachivalaya, Gandhinagar, 19<sup>th</sup> December, 2018

#### **Water (Prevention and Control of Pollution) Act, 1974**

**No.GVN/2018/(23)/ENV/102017/1278/E.** In exercise of the powers conferred by clause (p) of sub-section (2) of section 64 of the Water (Prevention and Control of Pollution) Act, 1974 (6 of 1974) and pursuant to Hon'ble Supreme Court judgment dated 22/09/2017 in Civil Appeal No.1561/2017, the Government of Gujarat, after consultation with the Gujarat Pollution Control Board, hereby makes the following rules further to amend the Gujarat Water (Prevention and Control of Pollution) Rules, 1976, namely;

- 1) These rules may be called the Gujarat Water (Prevention and Control of Pollution) (8<sup>th</sup> Amendment) Rules, 2018.
- 2) They shall come into force on and from the date of publication in the Official Gazette.
- 3) In the Gujarat Water (Prevention and Control of Pollution) Rules, 1976 (hereinafter referred to as "the said rules"), after rule 31, the following shall be added, namely: -

#### **32. Qualification, Experience and other criteria for nomination of Chairman.**

The Chairman of the Gujarat Pollution Control Board shall

- (1) be of at least 45 years in age and not more than 65 years;
- (2) possess a post graduate degree in Environmental Science or Environmental Management or allied sciences or a graduate degree awarded after the successful completion of a graduate degree course of a minimum of four years in Environmental Engineering or Environmental Technology or an equivalent degree thereto; or

should be a serving government officer of Secretary or equivalent rank, and should have worked for a total of at least 3 years in the departments of forests, environment, climate change, industries, mines, urban development, transport, energy and / or in one or more offices or institution or state public sector undertakings under the aforesaid departments that handle the work of pollution control or environment protection or environmental management or industrial development or urban development or transport or energy or mining; or

if the person is not a serving government officer than he should possess a graduate degree and have experience in one or more sectors amongst the sectors of forests, environment, industries, mines, urban development, transport or energy for a minimum period of 3 years.

### 33. **Qualification, Experience and other criteria for appointment of Member Secretary.**

The Member Secretary of the Gujarat Pollution Control Board shall

- (1) be of at least 35 years in age and not more than 60 years;
- (2) possess a post graduate degree in Environmental Engineering or Environmental Science or Environment Management or Earth Sciences or Sustainable Development or Ecology or related subject, where pollution control or pollution management is part of academic assessment; and
- (3) have worked in a senior position in the Government of India or a State Government or the Central Pollution Control Board or a State Pollution Control Board or a Central Public Sector Undertaking or a State Public Sector Undertaking, or an office or institution under the Central or State Government, where he has directly handled the subject of pollution control for a minimum of 7 years.

By order and in the name of the Governor of Gujarat,

**S. M. SAIYAD,**

Additional Secretary to Government

-----

## **FOREST AND ENVIRONMENT DEPARTMENT**

### **Notification**

Sachivalaya, Gandhinagar.

Dated 19/12/2018

### **Air (Prevention and Control of Pollution) Act, 1981**

**No.GVN/2018/(24)/ENV/102017/1278/E.** In exercise of the powers conferred by clause (z) of sub-section, (2) of section 54 of the Air (Prevention and Control of Pollution) Act, 1981 (14 of 1981) and pursuant to Hon'ble Supreme Court judgment dated 22-09-2017 in Civil Appeal no.1561/2017, the Government of Gujarat, after consultation with the Gujarat Pollution Control Board, hereby makes the followings rules further to amend the Gujarat Air (Prevention and Control of Pollution) Rules 1983, namely.

- 1) These rules may be called the Gujarat Air (Prevention and Control of Pollution) (4<sup>th</sup> Amendment) Rules, 2018.
- 2) They shall come into force on and from the date of publication in the Official Gazette.
- 3) In the Gujarat Air (Prevention and Control of Pollution) Rules 1983, (herein after referred to as "the said rules"), after rule 25, the following shall be added namely: -

**26. Qualification, Experience and other criteria for nomination of Chairman.**

The Chairman of the Gujarat Pollution Board Shall

- (1) be of at least 45 years in age and not more than 65 years.
- (2) possess a post graduate degree in Environmental Science or Environmental Management or allied science or a graduate degree awarded after the successful completion of a graduate degree course of a minimum of four years in Environmental Engineering or Environmental Technology or an equivalent degree thereto, or

Should be a serving government officer of Secretary or equivalent rank and should have worked for a total of at least 3 years in the departments of forests, environment, climate change, industries, mines, urban development, transport, energy and / or in one or more offices or institutions or state public sector undertakings under the aforesaid departments that handle the work of pollution control or environmental protection or environmental management or industrial development or urban development or transport or energy of mining, or

If the person is not a serving government officer than he should possess a graduate degree and have experience in one or more sectors amongst the sectors of forest, environment, industries, mines, urban development, transport or energy for a minimum period of 3 years.

**27 Qualification, Experience and other criteria for appointment of Member Secretary.**

The Member Secretary of the Gujarat Pollution Control Board shall.

- (1) Be of at least 35 years in age and not more than 60 years,
- (2) Possess a post graduate degree in Environmental Engineering or Environmental Science or Environmental Management or Earth Science of Sustainable Development or Ecology or related subject, where Pollution Control or Pollution Management is part of academic assessment.
- (3) Have worked in a senior position in the Government of India or a State Government or the Central Pollution Control Board or a State Pollution Control Board or a Central Public Sector Undertaking or a State Public Sector Undertaking or an office or institution under the Central or State Government, where he has directly handled the subject of pollution control for a minimum of 7 years.

By order and in the name of the Government of Gujarat,

**S. M. SAIYAD,**

Additional Secretary to Government

-----

**FOREST AND ENVIRONMENT DEPARTMENT****Notification**

Sachivalaya, Gandhinagar.

Dated 19/12/2018

**Water (Prevention and Control of Pollution) Act, 1974**

**No.GVN/2018/(25)/ENV/102017/1278/E.** In exercise of the powers conferred by clause (e) of sub-section (2) of section 64 of the Water (Prevention and Control of Pollution) Act, 1974 (6 of 1974), the Government of Gujarat, after consultation with the Gujarat Pollution Control Board, hereby makes the following rules further to amend the Gujarat Water (Prevention and Control of Pollution) Rules, 1976, namely:

- 1) These rules may be called the Gujarat Water (Prevention and Control of Pollution) (9<sup>th</sup> Amendment) Rules, 2018.
- 2) They shall come into force on and from the date of Publication in the Official Gazette.
- 3) In the Gujarat Water (Prevention and Control of Pollution) Rules, 1976 (hereinafter referred to as “the said rules”) after rule 33, the Following shall be added, namely: -

**34. Tenure of Chairman.**

The Chairman of the Gujarat Pollution Control Board shall hold office for a term of three years from the date of nomination, which may be extended for one more term of three years.

Provided that the Government may, if it thinks fit, remove the Chairman before the expiry of his term of office.

By order and in the name of the Governor of Gujarat,

**S. M. SAIYAD,**

Additional Secretary to Government

-----

**FORST AND ENVIRONMENT DEPARTMENT**

**Notification**

Sachivalaya, Gandhinagar.

Dated 19/12/2018

**Air (Prevention and Control of Pollution), Act, 1981**

**No.GVN/2018/(26)/ENV/102017/1278/E.** In exercise of the powers conferred by clause (aa) of sub-section (2) section of 54 of the Air (Prevention and Control of Pollution) Act, 1981 (14 of 1981), the Government of Gujarat, after consultation with the Gujarat Pollution Control Board, hereby makes the following rules further to amend the Gujarat Air (Prevention and Control of Pollution) Rules, 1983, namely:

- 1) These rules may be called the Gujarat Air (Prevention and Control of pollution) (5<sup>th</sup> Amendment) Rules, 2018.
- 2) They shall come into force on and from the date of publication in the official Gazette.
- 3) In the Gujarat Air (Prevention and Control of Pollution) Rules, 1983 (hereinafter referred to as “the said rules”), after rule 27, the following shall be added, namely:

**28. Tenure of Chairman.**

The Chairman of the Gujarat Pollution Control Board shall hold office for a term of three years from the date of nomination, which may be extended for one more term of three years.

Provided that the Government may, if it thinks fit, remove the Chairman before the expiry of his term of office.

By order and in the name of the Governor of Gujarat,

**S. M. SAIYAD,**

Additional Secretary to Government

-----

**FOREST AND ENVIRONMENT DEPARTMENT****Notification**

Sachivalaya, Gandhinagar.

Dated 19/12/2018

**Water (Prevention and Control of Pollution) Act, 1974**

**No.GVN/2018/(27)/ENV/102017/1278/E.** In exercise of the powers conferred by clause (e) of sub-section (2) of section 64 of the Water (Prevention and Control of Pollution) Act, 1974 (6 of 1974), the Government of Gujarat, after consultation with the Gujarat Pollution Control Board, hereby makes the following rules further to amend the Gujarat Water (Prevention and Control of Pollution) Rules, 1976, namely:

- 1) These rules may be called the Gujarat Water (Prevention and Control of Pollution) (10<sup>th</sup> Amendment) Rules, 2018.
- 2) They shall come into force on and from the date of publication in the Official Gazette.
- 3) In the Gujarat Water (Prevention and Control of Pollution) Rules, 1976 (hereinafter referred to as “the said rules”), after rule 34, the following shall be added, namely: -

**35. Tenure of Member Secretary**

The Member Secretary of the Gujarat Pollution Control Board shall hold office for a term of five years from the date of appointment, which may be extended.

Provided that the State Government may, if it thinks fit, remove the Member Secretary before the expiry of his term of office.

By order and in the name of the Governor of Gujarat,

**S. M. SAIYAD,**

Additional Secretary to Government

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**FOREST AND ENVIRONMENT DEPARTMENT****Notification**

Sachivalaya, Gandhinagar.

Dated 19/12/2018

**Air (Prevention and Control of Pollution) Act, 1981**

**No.GVN/2018/(28)/ENV/102017/1278/E.** In exercise of the powers conferred by clause (f) of sub-section (2) of section 54 of the Air (Prevention and Control of Pollution) Act, 1981 (14 of 1981), the Government of Gujarat, after consultation with the Gujarat Pollution Control Board, hereby makes the following rules further to amend the Gujarat Water (Prevention and Control of Pollution) Rules, 1983, namely:

- 1) These rules may be called the Gujarat Air (Prevention and Control of Pollution) (6<sup>th</sup> Amendment) Rules, 2018.
- 2) They shall come into force on and from the date of publication in the Official Gazette.
- 3) In the Gujarat Air (Prevention and Control of Pollution) Rules, 1983 (hereinafter referred to as “the said rules”), after rule 28, the following shall be added, namely: -

**29. Tenure of Member Secretary**

The Member Secretary of the Gujarat Pollution Control Board shall hold office for a term of five years from the date of appointment, which may be extended.

Provided that the State Government may, if it thinks fit, remove the Member Secretary before the expiry of his term of office.

By order and in the name of the Governor of Gujarat,

**S. M. SAIYAD,**

Additional Secretary to Government

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### PART IV-A

Rule and Orders (Other than those published in Parts I, I-A, and I-L) made  
by the Government of Gujarat under the Central Acts

#### FOREST AND ENVIRONMENT DEPARTMENT

#### Notification

Sachivalaya, Gandhinagar, 19<sup>th</sup> December, 2018

#### Indian Forest Act, 1927 (XVI OF 1927)

No. GVN/2018-(22 )/JJM/16-02/18/GSF-19/F.- In exercise of the powers conferred by section (4) and (17) of the Indian Forest Act, 1927 ( XVI OF 1927 ), in its application to the state of Gujarat, (hereinafter referred to as "The said act".) the Government of Gujarat hereby :

- (a) Declares that it has been decided to constitute the land in the village of Kanjara in Mundra Taluka of Kutchh District specified in the schedule appended here to "under section-4".  
(b) Forest settlement officer, Bhuj who is referred as "Forest Settlement Officer" hereafter to be the officer for the purpose of clause (c) of Sub-Section(I) of section-4 and,
- Appoints the Collector, Kutchh District at Kutchh to hear the appeals from any orders passed by the said Forest settlement officer under section 11,12,15 and 16 of the said Act.

#### SCHEDULE

Taluka : Mundra

District : Kutchh

| Sr. No. | Name of the Village | Survey No.                | Area   |        | Boundaries  |
|---------|---------------------|---------------------------|--------|--------|---|
|         |                     |                           | A.G    | H.A    |   |
| 1       | 2                   | 3                         | 4      | 5      | 6   |
| 1       | Kanjara             | T.S.No 157/9 paiki part 1 | 568.00 | 230.00 | North : S.No. 97, 96, 92, 91, 157 Paiki open land, 90, 157 paiki open land, 88, 87/1, 87/2, 157 Paiki open land, 83/3, 83/4, 83/2, 157 paiki open land 160(Gaochar), 60, 157 Paiki open land, 61.<br>East : S. No. 69, 158 (Gaochar), 76/1, 77/3, 77/2, 77/1, 77/2, 78/1, 78/2<br>South : Village Boundary of Vanki<br>West: Village Boundary of Tappar |

| Sr. No. | Name of the Village | Survey No.                | Area   |        | Boundaries   |
|---------|---------------------|---------------------------|--------|--------|--|
|         |                     |                           | A.G    | H.A    |  |
| 1       | 2                   | 3                         | 4      | 5      | 6  |
| 2       | Kanjara             | T.S.No 157/9 paiki part 2 | 49.39  | 20.00  | North : S.No. 158(Gaochar), 75 Village Boundary of Bandhara<br>East : Village Boundary of Vanki<br>South : Village Boundary of Vanki<br>West : S.No.76/3, 76/2, 76/1, 158(Gaochar) |
| Total   |                     |                           | 617.39 | 250.00 |  |

By order and in the name of the Governor of Gujarat,

**MANISH C. SHAH,**  
Under Secretary to Government.

વન અને પર્યાવરણ વિભાગ

**જાહેરનામું**

સચિવાલય, ગાંધીનગર, ૧૮મી ડિસેમ્બર, ૨૦૧૮

સને ૧૮૨૭ ના ભારતના જંગલો બાબત (સને ૧૮૨૭ના ૧૬માં) અધિનિયમ અન્વયે ક્રમાંક : ગવન/૨૦૧૮-(૨૨)/જજમ/૧૬-૦૨/૧૮/જીએસએફ-૧૮/એફ, ગુજરાત રાજ્યને લાગુ હોય તેટલે સુધી, સને ૧૮૨૭ ના ભારતના જંગલો બાબતના (સને ૧૮૨૭ ના ૧૬ માં) અધિનિયમ જેનો આમાં હવે પછી “ઉક્ત અધિનિયમ” તરીકે ઉલ્લેખ કર્યો છે તેની કલમો (૪) અને (૧૭)ની રૂએ મળેલા અધિકારો અન્વયે ગુજરાત સરકાર, આથી

- (૧) (અ) જાહેર કરે છે કે, આ સાથે જોડેલી અનુસૂચિમાં નિર્દિષ્ટ કરેલ કચ્છ જિલ્લાના, મુન્દ્રા તાલુકાના મોજે. કણજરા ગામની જમીનને “કલમ-૪” હેઠળ જાહેર કરવાનું નક્કી કરવામાં આવ્યું છે, અને
- (બ) જંગલ નિયામક અધિકારી (ફોરેસ્ટ સેટલમેન્ટ ઓફિસર) ભુજને જેનો કલમ (૪)ની પેટા કલમ-(૧)ની પેટા કલમ-(ક)ના હેતુઓ સારું અધિકારી તરીકે નિયુક્ત કરવામાં આવે છે.
- (૨) ઉક્ત અધિનિયમની કલમો-૧૧, ૧૨, ૧૫ અને ૧૬ અન્વયે ઉક્ત ફોરેસ્ટ સેટલમેન્ટ ઓફિસરે પસાર કરેલ કોઈપણ આદેશો પર અપીલ સાંભળવા કચ્છ જિલ્લાના કલેક્ટરશ્રીને નિયુક્ત કરવામાં આવે છે.

અનુસૂચિ

તાલુકો : મુન્દ્રા

જિલ્લો : કચ્છ

| અ. નં. | ગામનું નામ | સર્વે નંબર              | વિસ્તાર   |        | ચતુ:સીમા  |
|--------|------------|-------------------------|-----------|--------|---|
|        |            |                         | એકર-ગુંઠા | હે.-આર |   |
| ૧      | ૨          | ૩                       | ૪         | ૫      | ૬   |
| ૧      | કણજરા      | ટ્રા.સ.૧૫૭ પૈકી ૮ ભાગ-૧ | ૫૬૮.૦૦    | ૨૩૦.૦૦ | ઉત્તર : સ.નં. ૮૭, ૮૬, ૮૨, ૮૧, ૧૫૭ પૈકી ખુલ્લી જમીન, ૮૦, ૧૫૭ પૈકી ખુલ્લી જમીન, ૮૮, ૮૭/૧, ૮૭/૨, ૧૫૭ પૈકી ખુલ્લી જમીન, ૮૩/૩, ૮૩/૪, ૮૩/૨, ૧૫૭ પૈકી ખુલ્લી જમીન ૧૬૦(ગૌચર), ૬૦, ૧૫૭ પૈકી ખુલ્લી જમીન, ૬૧<br>પૂર્વ : સ.નં. ૬૮, ૧૫૮(ગૌચર), ૭૬/૧, ૭૭/૩, ૭૭/૨, ૭૭/૧, ૭૭/૨, ૭૮/૧, ૭૮/૨<br>દક્ષિણ : વાંકી ગામનો સીમાડો<br>પશ્ચિમ : ટપ્પર ગામનો સીમાડો |



| અ. નં. | ગામનું નામ | સર્વે નંબર                    | વિસ્તાર   |        | ચતુ:સીમા   |
|--------|------------|-------------------------------|-----------|--------|--|
|        |            |                               | એકર-ગુંઠા | હે.-આર |  |
| ૧      | ૨          | ૩                             | ૪         | ૫      | ૬  |
| ૨      | કણજરા      | ટ્રા.સ.૧૫૭<br>પૈકી ૯<br>ભાગ-૨ | ૪૯.૩૯     | ૨૦.૦૦  | ઉત્તર : સ.ન. ૧૫૮(ગૌચર), ૭૫, બંધરા ગામનો સીમાડો<br>પૂર્વ : વાંકી ગામનો સીમાડો<br>દક્ષિણ : વાંકી ગામનો સીમાડો<br>પશ્ચિમ : સ.નં.૭૬/૩, ૭૬/૨, ૭૬/૧, ૧૫૮(ગૌચર) |
| કુલ:   |            |                               | ૬૧૭.૩૯    | ૨૫૦.૦૦ |  |

ગુજરાતના રાજ્યપાલશ્રીના હુકમથી અને તેમના નામે,

મનીષ સી. શાહ,  
સરકારના ઉપસચિવ.

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सत्यमेव जयते

# The Gujarat Government Gazette

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SATURDAY, DECEMBER 29, 2018/PAUSA 8, 1940

Separate paging is given to this Part in order that it may be filed as a Separate Compilation.

## PART IV-A

**Rules and Orders (Other than those published in Parts I, I-A, and I-L) made  
by the Government of Gujarat under the Central Acts**

**FOOD, CIVIL SUPPLIES AND CONSUMER AFFAIRS DEPARTMENT**

### Notification

Sachivalaya, Gandhinagar, 28<sup>th</sup> December, 2018.

#### CONSTITUTION OF INDIA.

**No: GTH/36/KMV/102009/540982 (2018/PT-I FILE):**— In exercise of the powers conferred by the proviso to article 309 of the Constitution of India, the Governor of Gujarat hereby makes the following rules further to amend the Assistant Controller of Legal Metrology and Assistant Consumer Affairs Officer, Class II, Recruitment Rules, 2016, namely :-

1. These rules may be called the Assistant Controller of Legal Metrology and Assistant Consumer Affairs Officer, Class II, Recruitment (Amendment) Rules, 2018.
2. In the Assistant Controller of Legal Metrology and Assistant Consumer Affairs Officer, Class II, Recruitment Rules, 2016, in rule 2, in clause (a),
  - (i) In sub-clause (i), after the words "Legal Metrology and Consumer Affairs, for the word "and", the word "or" shall be substituted.
  - (ii) After sub clause (i) the following sub clause (ii) shall be inserted, namely:-

"Have about seven years combined experience in the cadre of Senior Inspector of Legal Metrology and Consumer Affairs Officer, Class III and Junior Inspector of Legal Metrology, Class III, out of which minimum three years experience in the cadre of Senior Inspector of Legal Metrology and Consumer Affairs Officer, Class III, in the subordinate service of the Controller of Legal Metrology and Consumer affairs;"

Provided that sub clause (ii) shall remain in force up to 31st December 2023".
  - (iii) The existing sub-clause (ii) shall be renumbered as sub-clause (iii);
  - (iv) In the existing proviso, after the word "provided", the word "further" shall be inserted.

By order and in the name of the Governor of Gujarat.

**V. D. RATHAVI,**  
Under Secretary to Government